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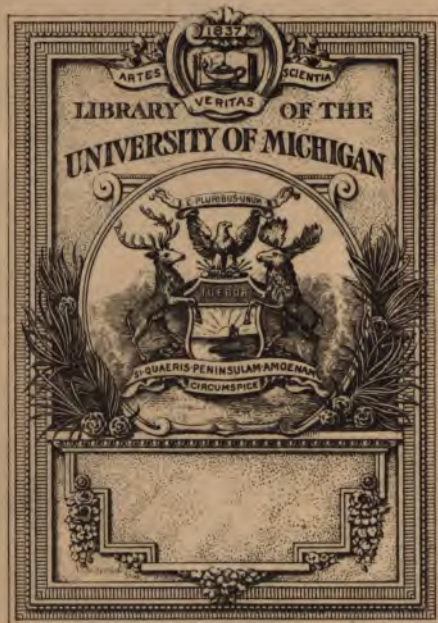
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DISEASES OF PERSONALITY.

BY TH. RIBOT.

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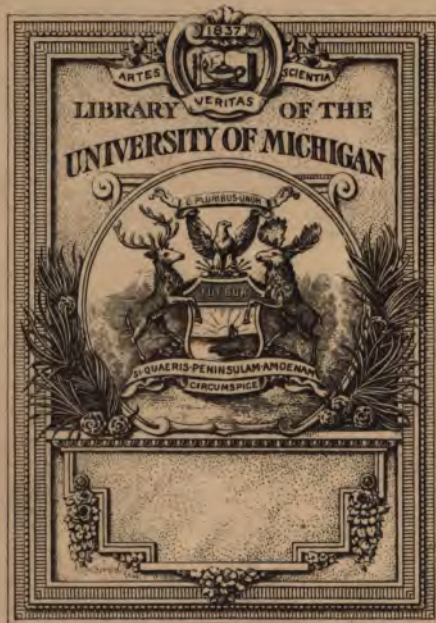
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THE
DISEASES OF PERSONALITY

BY

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ERRATA.

Page 6, line 12 from top ; for *by* read *for*.

Page 12, line 15 from top ; for *actually* read *in the present instance*.

Page 16, line 7 from bottom ; for *relation* read *revelation*.

Page 17, line 8 from top ; for *dictum* read *datum*.

Page 24, foot-note, first line ; for *The Senses and Intelligence* read *The Senses and the Intellect*.

Page 24, foot-note, last line ; for *Pathology of Spirit* read *Pathology of Mind*.

Page 27, lines 10, 9, and 8 from bottom ; for *all consciousness, whether clear or obscure, actual or reproduced by some external circumstance* read *all consciousness whether clear or obscure, actual or reproduced, of any extraneous thing*.

Page 29, line 14 from bottom ; for *exerts* read *exhibits*.

Page 44, line 18 from top ; delete the comma after *Siamese*.

Page 49, line 7 from top ; read *attended* for *attented*.

Page 53, line 5 from bottom ; *physical personality*: the original also reads "physical personality"; perhaps *psychical*.

Page 84, line 3 from bottom ; delete *by way of*.

Page 106, line 10 from top ; delete *that it looks quite obvious*.

Page 110, line 2 from top ; for *mancinism* read *Manicheism*.

Page 120, lines 11 and 12 from bottom ; for *Hypertrophied* and *atrophied* read *Hypertrophy* and *atrophy*.

Page 124, line 10 from top ; for *hynotising* read *hypnotising*.

Page 124, last line of large type ; for *purpose* read *investigation*.

DISEASES OF PERSONALITY.

INTRODUCTION.

I.

IN psychological language by "person" we generally understand the individual as clearly conscious of itself, and acting accordingly. It is the highest form of individuality. In order to explain this attribute, which metaphysical psychology exclusively reserves for man, the latter science is satisfied with the hypothesis of an ego ; that is a perfect unity, simple and identical. Unfortunately, however, this is only a deceptive clearness and the semblance of a solution. Unless we attribute to this ego a supernatural origin, it will be necessary to explain how it is born, and from what lower form it proceeds.

Experimental psychology does not propose the problem in the same manner, or treat it according to the same methods. Experimental psychology learns from natural scientists that in many instances it is difficult to determine the characteristics of individuality, even of those creatures that are by far less complex than human persons. Hence it mistrusts any purely simple solution, and, far from regarding the question as settled, as it were, at the first onset, it sees the problem at the close of its researches, as rather the result of long and laborious investigations. Therefore, it is but natural that the representatives of the

old school, after once having lost their true bearings, should groundlessly accuse the adepts of the new school of actually purloining their ego. But on either side both language and methods have now become so different, that all mutual understanding henceforth will be impossible.

It will be necessary, even at the risk of increasing the already extant confusion, to investigate what teratical, morbid, or simply rare, cases can teach us concerning the formation and disorganization of personality, yet without assuming to treat the subject in its totality.

Personality being the highest form of psychic individuality, there arises the preliminary question: What is the individual? There are few problems that in our time have been more discussed among natural scientists, or remain more obscure in regard to the lower degrees of animal existence. This is not the right moment to speak of it in detail. At the close of this work, after studying the constitutive elements of personality, we shall consider it in its totality. Then will occur the time, to compare it with the lower forms, through which nature has essayed to produce it, and to show, that the psychic individual is the expression of an organism; in conformity with the latter, it is either low, simple, incoherent, or complex and unified.

Descending the whole series of animated beings, we see how the psychic individual is always formed through the more or less complete fusion of more simple individuals. "A colonial consciousness" is created through the coöperation of local consciousnesses. The discoveries of modern naturalists, in this respect, are of the utmost importance to psychology, because they completely transform the problem of personality. The

latter henceforth must be studied from below—from the lowest step of the ladder.

Thus we are prompted to ask, whether the human person itself is not also, *un tout de coalition*—a whole by coalition—the extreme complexity of which veils from us its origin, and whose origin would remain impenetrable, if the existence of elementary forms did not throw a certain light upon the mechanism of this fusion. In fact, the human personality is an aggregated whole, a complex. In order to know it, we must analyze it; but the analysis here is fatally artificial, because it disjoins groups of phenomena, which do not merely stand in juxtaposition, but are really coördinate, their relation being not of simple simultaneousness, but of reciprocal dependence. And yet, this work of analysis is altogether indispensable and we must severally undertake to investigate the *organic, emotional, and intellectual* conditions of personality, at the same time laying due stress on occurring anomalies and disorders. Our final study of the subject will allow us to group together anew these several disjoined elements.

II.

BEFORE entering into the exposition and interpretation of facts, it is first useful, even for reasons of clearness and good faith, to understand the true nature of consciousness. It is not here the question of a monograph embracing, as it were, the entire science of psychology; it will suffice, simply, to present the problem in a precise form.

Leaving aside details, we are confronted by two hypotheses; the one, a very old hypothesis, which regards consciousness as the basic property of "soul"

or of "mind," constituting its essence; the other, a very recent theory, which regards it as a simple phenomenon, superadded to the activity of the brain—as an event having its own conditions of existence, and which appears or disappears according to circumstances. The former hypothesis has for so many centuries reigned supreme, that it has become an easy matter to appreciate its respective merits and deficiencies. I have not to pass sentence on this theory; I shall limit myself to showing its radical incompetency to explain the unconscious life of the mind. At first, during a long time, this hypothesis did not even mention this unconscious life. The precise and profound views of Leibnitz upon this point remain forgotten or, at least, without any application; and in the present century, even, the most renowned psychologists (with only a few exceptions) yet remain ensconced within their theory of conscious life. When finally the problem thrust itself forward, and it became evident to all, that to reduce psychic life to the sole data of consciousness, is such a poor and sterile conception, that practically it becomes useless—then, indeed, there arose a very great confusion. Then, so-called "unconscious states" were admitted,—an ambiguous and half-contradictory term, which has rapidly spread, and has its equivalent in all languages, but by its very nature betrays the period of confusion, in which it was born. In fact, what are these unconscious states? Prudent writers posit their existence, without attempting to explain them. The more venturesome speak of latent ideas, of unconscious consciousness, both of which are expressions so vague and so full of inconsequences that many authors have been compelled to admit their shortcomings. In fact,

when the soul is conceived in its quality of a thinking substance, whose states of consciousness are modifications, in such case it will be impossible without a manifest contradiction to refer to it the unconscious states; subterfuges of language or dialectic subtleties will be of no avail; and as we can not deny the high importance of these unconscious states as factors of psychic life, there would be no exit from this inextricable situation.

The latter hypothesis rids itself of all this conflicting logomachy; it does away with the factitious problems that crop up in the former (for example, whether consciousness is a general or particular faculty, etc.), and without hesitation we may claim for it the benefit of a *lex parcimoniae*. It is simpler, clearer, more consistent. By way of contrast to the other, we may characterize it by saying, that it expresses the unconscious in physiological terms (as states of the nervous system), and not in psychological terms (as latent ideas, non-felt sensations, etc.). But, this is only a particular side of an hypothesis, which must be considered in its entirety.

Like all general terms, consciousness must be resolved into concrete data. Will, in general, does not exist, but volitions; and in a like manner there is no consciousness in general, but only states of consciousness. The latter are the reality.

It would be idle to define consciousness as: "the fact of being conscious," for this is merely a datum of observation, a final fact. Physiology teaches that its production is always associated with some activity of the nervous system, particularly of the brain. The reverse, however, does not take place. All psychic activity certainly implies nervous activity; still, all nervous activity

does by no means imply psychic activity — nervous activity being far more extended than psychic activity. Consciousness, accordingly, is something superadded.

In other terms, we have to bear in mind, that every state of consciousness is a complex event, conditioned by a particular state of the nervous system. This nervous process is not an accessory but an essential part of the event, and, moreover, is its basis and fundamental condition. As soon as produced, the event exists *in* itself; as soon as consciousness is added to it, the event exists *by* itself. Consciousness completes and perfects the event, but does not constitute the same.

This hypothesis easily explains how all manifestations of psychic life, sensations, desires, feelings, volitions, memories, reasonings, inventions, etc., may alternately be conscious and unconscious. There is nothing mysterious in these alternations, since in all cases the essential conditions, *i. e.*, the physiological conditions, ever remain the same, and consciousness is but a perfectionment.

Yet, why is this perfectionment sometimes superadded, and at other times lacking?

If in the physiological phenomenon itself there was not something more when consciousness is present than when it is absent, we should indirectly adjudge victory to the adverse hypothesis. Could it be proved that every time certain physiological conditions exist, consciousness will appear; that whenever they disappear, the former disappears; and whenever they vary, consciousness also varies — this would no longer be an hypothesis, but actually a scientific truth. We are still very far from this point.

At all events, we may be sure that consciousness

itself will not furnish these revelations. As Maudsley justly observes, consciousness at the same moment cannot be effect and cause,—cannot be itself and its molecular antecedents. It lives but for a moment, and cannot through a direct intuition return backward as far as its own immediate physiological antecedents; and moreover, to go back to its material antecedents, would be to lay hold of, not itself, but its own cause.

At the present moment it would be chimerical to attempt even a broad determination of the necessary and sufficient conditions of the appearance of consciousness. We know, indeed, that cerebral circulation, in the double relationship of the quantity and quality of the blood, is a matter of great importance. A striking proof of this is furnished by experiments performed upon the heads of recently beheaded animals. Psychometric researches demonstrate every day that the more complex a state of consciousness is the greater length of time it requires, and that, on the contrary, automatic acts—whether primitive or acquired, and the rapidity of which is extreme—do not enter into consciousness. We may, moreover, admit that the appearance of consciousness is connected with the period of disassimilation of the nervous tissue, as Herzen distinctly has shown.* All these results, however, are only partial conquests; but, the scientific knowledge of the genesis of a phenomenon supposes the determination of *all* its essential conditions.

The near future, perhaps, will furnish these. In the meantime, in order to corroborate our hypothesis, it will be more profitable to prove, that it alone

* *Revue Philosophique*, Vol. VII, p. 353, and *La Condizione fisica della Coscienza*. Rome, 1879.

explains a principal characteristic (not a condition) of consciousness, namely, its *intermission*. In order from the outset to avoid all equivocation, I may observe that here it is not the question of the discontinuity of the states of consciousness among themselves. Each state of consciousness has its limits which, while allowing it to associate with the others, at the same time will protect their respective individualities. Here it is not the question of this, but simply of the well-known fact that consciousness has its interruptions, or as is said in, popular parlance: "Man does not always think."

It is true that this assertion has been contradicted by the majority of metaphysicians. As a matter of fact they never have furnished any proof for the support of their thesis, and as all appearances are against it, the *onus probandi* would legitimately seem to be incumbent on the former. Their whole argumentation reduces itself to maintaining that since the soul is essentially a thinking subject, it is impossible that consciousness should not exist in some certain degree, even when there remains no trace of it in the memory. But this is simply begging the question, since the hypothesis maintained by us contests precisely their major premise. Their alleged proof is definitively but a deduction drawn from a contested hypothesis. Leaving aside all *a priori* solutions let us examine the question in itself. Let us leave aside the cases of syncope, provoked anæsthesia, epileptic vertigo, coma, etc., and abide by what is more common, more frequent, to wit: the psychic state during sleep.

It has been maintained that there is no sleep without dreams; but this is a purely theoretic assertion, and a consequence of the above-mentioned principle, that

the soul always thinks. The sole argument of fact that they can plead, is to the effect, that sometimes the sleeper, addressed or questioned, may answer in a sufficiently pertinent manner, yet upon waking will have no recollection of the matter. Still, this fact alone does not justify any general conclusion and to the theory of the metaphysicians physiology opposes another. Physiology lays stress on the fact that the life of every organ comprises two periods: the one of relative rest or assimilation, the other of activity or disassimilation; that the brain makes no exception to this law and that experience shows, how the duration of sleep at different times and in the different circumstances of life stands in direct ratio to the craving of assimilation. The cause is the necessity of repairing the losses sustained; of making nutritive circulation follow upon functional circulation. During the state of being awake the brain consumes more material than the blood furnishes, so that oxidation soon diminishes and along with it the excitability of the nervous tissue. The experiments of Preyer prove that sleep then will overtake the subject, when through prolonged activity the substance of the brain, like that of a fatigued muscle, is encumbered with a quantity of acid waste material (*detritus*).* Even the presence of these products at a given moment will stop the activity of the brain, and the latter does not reappear before rest has allowed the complete elimination of these waste products. It must be admitted, that complete, absolute sleep, without dreams, is the exception; but that it actually occurs, and not unfrequently, suffices to establish the intermittent character of consciousness.

* Through the absorption of a certain quantity of lactate of soda, as a type of the products of disassimilation in the brain, Preyer has produced yawning, somnolence, and even sleep.

The physiological thesis has a much stronger demonstrative value than the metaphysical thesis. Let us further remark—and this is an important point—that all those who have investigated whether there exists perfect cerebral sleep, have been cultured and active minds (psychologists, physicians, men of letters,) in whom the brain is ever upon the alert, like a delicate instrument vibrating to the touch of the slightest excitation, and endowed, as it were, with a constant habit of consciousness. Thus, it happens that the very men who propound the problem: “Do we always dream?” in reality are the least competent to solve it negatively.

But the same does not happen with people engaged in the manual trades. A peasant living far from all intellectual agitation, limited to the same occupations and same routine, generally speaking, does not dream. I know several, who regard dreams as a rare incident in their nocturnal life. “The most convincing proof, that the mind can be completely inactive during sleep, that its existence can be momentarily interrupted or suspended, would incontestably be furnished, if the mind should join end to end, as it were, the instant in which a man falls asleep with that in which he awakes, and when this space of time appears to him, as if it had never existed. Philosophers, who do not believe in complete sleep, themselves have pointed out this kind of proof, at the same time denying that it had ever occurred. I, myself, nevertheless, have been a witness to this fact under the following circumstances: I was called at two o'clock in the morning to lend my assistance to a person in the neighborhood, attacked by cholera. At the moment of going out my wife made some admonitory remarks about the candle that I held in my hand, and immediately fell

asleep again. I returned home in about half an hour. The noise, caused by the key in opening the door, suddenly awoke my wife.

"Her sleep had been so deep, and she had so closely joined the instant at which she fell asleep with the instant at which she awoke, that she believed she had not slept at all, and imagined that the noise made by the key on my return actually was the noise made at the moment of my departure. Beholding my return, she thought I had merely stepped round, and asked me the reason why; and she was greatly astonished to hear, that I had been absent during half an hour."*

I do not see what objections can be made to facts of this kind, unless, indeed, we revert to the unavoidable hypothesis of states of consciousness that left no trace in the memory; but, I repeat, this is merely a gratuitous hypothesis, destitute of probability. Those who are subject to fits of fainting, with loss of consciousness well know, that pending their duration they might fall down, hurt a limb, upset a chair, and on recovering their senses, not have the faintest idea of what had taken place. If these sufficiently serious incidents had been attended with consciousness, is it likely that they would not have left any persistent recollection at least for a few seconds? We do not for a moment deny that in certain circumstances, normal or morbid (for example in hypnotized subjects), states of consciousness will leave no apparent traces on awaking, and can later be revived again; we shall even limit to any desired extent the actual instances of com-

* Despine, *Natural Psychology*, Vol. I. p. 522. Alienists have mentioned cases in which a pathologic state suddenly happens to suppress consciousness, and the patient after a more or less long interval resumes his speech at the very word where he had stopped. See other facts of this kind in Winslow, "On Obscure Diseases," etc., p. 322, and following.

plete interruption of consciousness; it suffices that there be a single one, in order to raise insurmountable difficulties to the hypothesis of the soul as a thinking substance. In the contrary hypothesis, everything is easily explained. Since consciousness is an event depending upon determined conditions, it is not at all a matter of surprise that at times it should fail.

If this were the occasion to treat exhaustively the problem of consciousness, it also would be possible to prove, that in our hypothesis there is nothing wavering or contradictory in the relation of the conscious to the unconscious. The term unconscious can always be paraphrased as follows: a physiological state, which sometimes and even most frequently being accompanied by consciousness, or at its origin having been so, ^{in the present instance} actually is not so accompanied. This characteristic, although negative as psychology, is positive as physiology. It affirms that in every psychic event the basic and active element is the nervous process, the other is only a concomitant. As a consequence of this, there will no longer be any difficulty in understanding the proposition, that all manifestations of psychic life by turns can be either unconscious or conscious. To effect the former instance it is sufficient that there be produced a determined nervous process, that is, the putting into play of a determined number of nervous elements, forming a determined association, to the exclusion of all other nervous elements, and of all other possible associations. In the latter instance, it is necessary and sufficient that there be added certain supplementary conditions, whatever they may be, without changing anything in the nature of the phenomenon, except making it conscious. We further understand, how unconscious cerebration is able to perform such a heavy

piece of work noiselessly and, presently, after a very long incubation, will reveal itself through unexpected results. Every state of consciousness represents only a very inconsiderable portion of our psychic life, because every instant it is supported and, as it were, impelled by unconscious states. Each volition, for example, dives to the very depths of our being; the motives that accompany and apparently explain it, are never but a feeble part of its true cause. The same takes place in a great number of our sympathies, and this fact is to such a degree manifest that even minds completely destitute of observation, will often wonder at being unable to explain to themselves their aversions or sympathies.

It would be irksome and beyond our purpose to continue the present demonstration. If the reader wishes, he may turn in Hartmann's *Philosophy of the Unconscious*, to the part bearing the title "Phenomenology." Here he will find classed all manifestations of the unconscious life of the mind, and he will see that in this classification there is not a single fact which may not be explained through the hypothesis that has here been sustained.

A last point still remains to be explained: the theory that regards consciousness as a phenomenon. It is the upshot (as could be easily proved, if this digression were opportune) of this fundamental principle in physiology: "reflex action is the type of nervous action and the basis of all psychic activity." To many over-cautious persons this theory has seemed paradoxical and irreverent. It seems to them that it deprives psychology of all solidity and dignity. They are unwilling to admit, that the slightest manifestations of nature should be unstable, transient, superadded, and

subordinate as to their conditions of existence. Yet this is simply a prejudice. Consciousness, whatever be its origin and nature, loses nothing of its genuine value: consciousness must be appreciated in itself; and to him who places himself at the point of view of evolution, the origin does not matter the most, but rather the height that has been attained. Experience, moreover, shows that the higher we reascend the series, the more complex and unstable become the natural compounds. If stability really afforded the true standard of dignity, in such case, the minerals would play the most prominent part. This purely sentimental objection, accordingly, is not tenable. As to the difficulty of explaining, through this hypothesis, the unity and continuity of the conscious subject, at present it would be premature even to moot this subject. In due time this problem, in its turn, will also appear.

There is, however, one weak point in the hypothesis of consciousness-phenomenon. Its most convinced partisans have defended it in a form that has caused them to be called the theorists of pure automatism. According to their favorite comparison, consciousness is like the sparks from a steam-engine, lighting it up at intervals, but having no effect upon its speed. Consciousness, thus, does not produce action any more than the shadow that accompanies the steps of the traveler. We have no objection to these metaphors, viewed purely as vivid illustrations of the doctrine in question; but taken in a strict sense they are exaggerated and inexact. Consciousness in itself and through itself is really a new factor, and in this there is nothing either mystical or supernatural, as will presently be seen.

In the first place, from the hypothesis itself (the

state of consciousness supposing physiological conditions more numerous, or at least other ones, than the same state when unconscious), it results that two individuals,—the one being in the former state, the other in the latter,—all other things being equal, are strictly speaking, not comparable to each other.

It is possible to allege even stronger reasons,—not logical deductions, but facts. When a physiological state has become a state of consciousness, through this very fact it has acquired a particular character. Instead of occurring in space, that is, instead of being conceived as the setting into activity of a certain number of nervous elements, occupying a determined surface, it assumes a position in *time*; it has been produced after this, and before that other thing, while in the unconsciousness state there was neither a before nor an after. The physiological state becomes susceptible of being recollected, *i. e.*, of being recognized as having occupied a precise position among other states of consciousness. It has, accordingly, become a new factor in the psychic life of the individual—a result that can serve as a starting-point to some new (either conscious or unconscious) work; and it is so far from being the product of a supernatural operation, that it reduces itself to the organic registering which is the basis of all memory.

In order to be more precise, let us take a few examples. Volition is always a state of consciousness—the affirmation that a thing must either be done or prevented; it is the final and clear result of a great number of conscious, sub-conscious, and unconscious states; but once affirmed, it becomes a new factor in the life of the individual, and, in the assumed position, it marks a series, *i. e.*, the possibility of being recommenced

(begun over again), modified, prevented. Nothing similar exists in regard to automatic acts that are not accompanied by consciousness. Novelists and poets, who usually are good observers of human nature, have frequently described that well-known situation, in which a passion—whether love or hatred—long brooded over, unconscious, ignorant of itself, at last bursting forth, recognizes, affirms, itself, becomes conscious. Then its character changes; it either redoubles in intensity or is crossed by antagonistic motives. Here, likewise, consciousness is a new factor, which has modified the psychological situation. One may by instinct, that is, through unconscious cerebration, solve a problem, but it is very possible that some other day, at another moment, one will fail in regard to an analogous problem. If, on the contrary, the solution of any problem is attained through conscious reasoning, a failure will scarcely occur in a second instance; because every step in advance marks a gained position, and from that moment we no longer grope our way blindly. This, however, does not in the least diminish the part played by unconscious work in all human discoveries.

These examples taken at hazard may suffice to show, that the above-mentioned metaphors are true of each state of consciousness *taken in itself*. In itself, indeed, it is but a light without efficacy, merely the simple relation of an unconscious work; but in relation to the future development of the individual it is a factor of the first order.

What is true of the individual is also true of the species, and of the succession of species. From the sole point of view of the survival of the fittest, and irrespective of all psychological considerations, the ap-

pearance of consciousness upon earth was a fact of the greatest magnitude. Through it experience, that is, an adaptation of a higher order, became possible to the organic animal. We have not to investigate its origin. In this respect, very clever hypotheses have been made, which all enter the domain of metaphysics, and which experimental psychology has not to discuss, because it accepts consciousness as a *dictum*.

It is probable that consciousness has been produced like any other vital manifestation, at first in a rudimentary form, and apparently without great efficacy. But from the moment it was able to leave behind a vestige, to constitute in the animal a memory for the psychic sense, utilizing its past for the profits of its future, from that moment a new chance of survival was created. To unconscious adaptation, blind, incidental, dependent upon circumstances, there was added a conscious adaptation, uniform, dependent upon the animal, surer and more rapid than the other; and the latter has shortened the work of selection.

Thus, the parts played by consciousness in the development of psychic life are manifest. I have dwelt rather long upon this point, because the advocates of the hypothesis, above set forth, have only considered it in its present form, without concerning themselves about that which results from its appearance.

They certainly had stated, that consciousness enlightens; but they had not shown, that consciousness also adds. To repeat once again our former statement: consciousness itself is but a phenomenon, only an accompaniment. If there exist animals, in which it should appear and disappear at each instant, without leaving any traces, it would be strictly correct to

call such animals spiritual automatons; but if the state of consciousness leaves a vestige, a registration in the organism, in such case it does not act merely as an indicator, but as condenser. The metaphor of an automaton is no longer acceptable. This being admitted, many objections to the theory of a consciousness-phenomenon fall to the ground of themselves. The theory is completed, without having been weakened.

CHAPTER I.

ORGANIC DISORDERS.

I.

I SHALL now dwell more at length upon the organic conditions of personality ; inasmuch as everything depends upon these and they explain all the rest. Metaphysical psychology, with logical consistency, has paid no attention whatever to these conditions ; for it derives its ego from above, and not from below. On the contrary, we shall maintain that the elements of personality must be sought for in the most elementary phenomena of life ; the latter, in fact, stamp it with its own distinctive mark and character.

In every animal the basis of its psychic individuality is the organic sense—the sense of the body, usually vague and obscure, but at times very clear in all of us.*

This organic sense is that “principle of individuation” so eagerly sought for by scholastic doctors, for the reason that everything—either directly or indirectly—rests upon it. We may regard as highly probable, that according as we descend toward the lower animals this organic sense of body will more and more preponderate, down to the point where it actually be-

* Incidentally, I may observe that a great metaphysician, Spinoza, plainly maintains the same thesis, although in different terms : “The object of the idea that constitutes the human soul is body....and nothing else.” “The idea that constitutes the formal existence of the human soul is not simple, but composed of several ideas.” (*Ethics*, part II. propositions 13 and 15. See also Scholia of prop. 17.)

comes the entire psychic individuality. But, in man and with the higher animals, the turbulent world of desires, passions, perceptions, images, and ideas covers up this silent back-ground. Except at given intervals, it is forgotten, from the fact that it is not known. Here the same takes place as in the order of social facts. The millions of human beings, making up a large nation, as regards itself and others, are reduced to a few thousand men, who constitute its clear consciousness, and who represent its social activity in all its aspects, its politics, its industry, its commerce, and its intellectual culture. And yet these millions of unknown human beings,—limited as to manner and place of existence, quietly living and quietly passing away—make up all the rest; without them there would be nothing. They constitute that inexhaustible reservoir, from out of which, through a rapid or sudden selection, a few individuals rise to the surface; but these favorites of talent, power, or wealth themselves enjoy but an ephemeral existence. Degeneracy—always fatally inherent in that which rises—will again lower their race and themselves, while the silent work of the ignored millions will continue to produce other ones, and to impress upon them a distinctive character.

Metaphysical psychology only keeps in view the lofty heights; but purely internal observation cannot tell us much about what takes place within the body, and, as a matter of course, from the very outset, the study of general sensibility has been mainly the work of physiologists.

Henle (1840) defined general sensibility or "*cœnæsthesis*" as: "the *tonus* of the sensible nerves, or the perception of the state of average activity in which these nerves are constantly engaged, even during the

moments when they are not excited by any external impression." And elsewhere: "General sensibility is the sum total, or the not yet unravelled chaos, of sensations that from every point of the body are being incessantly transmitted to the sensorium."* By the above-mentioned term E. H. Weber even more precisely understands: an internal sensibility, an inward touch that imparts information to the sensorium concerning the mechanical and chemico-organic state of the skin, the mucous and serous membranes, the viscera, the muscles, and the articulated parts.

In France, Louis Peisse, a physician-philosopher, was the first to react against the doctrine of Jouffroy, who maintained that we do not know our own body except in an objective manner, as an extended, solid mass, similar to other bodies in the universe, situated beyond the ego, and foreign to the perceiving subject. Peisse proved, though in somewhat cautious terms, that the knowledge of our body, above all, is entirely subjective. His description of this organic consciousness seems by far too correct, not to be quoted entire.

"Is it certain," he says, "that we have absolutely no consciousness of the activity of the organic functions? If it be the question of a clear, distinct, and locally determinable consciousness, like that of external impressions, it is clear that we lack it; but we might possibly possess a kind of silent consciousness, obscure, and latent, as it were, the analogue, for example, of that of sensations which provoke and accompany the respiratory movements—sensations, which, although incessantly repeated, pass by unperceived. In fact, might we not regard that remarkable feeling which

* *Pathologische Untersuchungen*, 1848, p. 114. *Allgemeine Anatomie*, 1841, p. 728.

ceaselessly and without intermission, warns us of the presence and actual existence of our own body, as a distant, faint, and confused echo of the universal vital activity? Almost always, and wrongly, we confuse this feeling with the accidental and local impressions that in waking hours arouse, stimulate, and maintain the play of sensibility. These sensations, though incessant, make but a fugitive and transient appearance on the stage of consciousness, while the feeling in question lasts and persists, even beneath this ever mobile theatrical display.

“Condillac very appropriately called it the basic feeling of existence; Maine de Biran termed it, the feeling of sensitive existence. Through this feeling, the body incessantly appears to the ego *as its own*, and through it the spiritual subject feels and perceives itself to exist, locally, as it were, within the limited extent of its organism. Like a constant, unfailing admonisher, it renders the state of the body incessantly present to consciousness, and thus, in the most intimate manner, displays the indissoluble bond subsisting between psychic and physiological life. In the usual state of equilibrium, which constitutes the state of perfect health, this feeling, as I said, is continuous, uniform, and is always equal, which prevents it from reaching the ego and attaining the state of distinct, special, and local sensation. In order to be distinctly remarked, it must acquire a certain intensity. This organic feeling is then expressed by a vague impression of well-being, or of general distemper; the former denoting a simple exaltation of vital physiological action; the latter its pathologic perversion. But in such case it does not fail to localize itself under the form of particular sensations, connected with some

certain region of the body. It often reveals itself in a more indirect, yet far more evident, manner, when it chances to fail in any given point of the organism; for example, in a limb struck by paralysis. Such a limb still naturally clings to the living aggregate, but it is no longer included in the sphere of the organic ego—if we may use this expression. The affected limb ceases to be perceived by the ego as *its own*, and the fact of this only negative separation is expressed by a particular, positive sensation, known to all, who have experienced a complete numbness of any member caused by cold or a compression of the nerves. The sensation is nothing more than the expression of the break or loss which the universal feeling of physical life suffers; it proves that the vital state of the limb in question really existed, though obscurely felt, and that it constituted one of the partial elements of the general feeling of life of the organic whole. In this manner any continuous, monotonous noise—as that of a carriage in which we happen to be riding—ceases to be perceived, although continuing all the time to be heard; for if it suddenly stops, its cessation will be instantly remarked.

“This analogy helps us to understand the nature and mode of existence of the basic feeling of organic life, which in this hypothesis simply would be a resultant “*in confuso*” of the impressions produced upon the living points by the internal movement of the functions carried to the brain, whether directly by the cerebro-spinal nerves, or mediately by the nerves of the ganglionic system.”*

Since the time when this passage was published

* Note to his edition of the “*Rapports du physique et du moral*,” by Cabanis, pp. 108, 109.

(1844) psychologists and physiologists have been at work studying the elements of this organic or general sense of the body. They have determined what each vital function contributes as its own share; they have shown how complex this confused feeling of life is, which, by means of incessant repetition has become ourselves; and that searching after it would be equivalent to seeking for ourselves. Consequently we know it only through the variations that raise it above, or lower it beneath the normal tone. The reader in various special works* will find the detailed study of these vital functions and their general physical contributions. It is not our purpose here to enter upon a special investigation of these topics, and therefore a condensed recapitulation will be sufficient.

In the first place, we have the organic sensations attached to respiration: the feeling of comfort produced by pure air; of suffocation from close air; those arising from the alimentary canal, and others, still more general, connected with the state of nutrition. Hunger and thirst, for example, despite appearances, have no precise localization; they simply result from a discomfort of the whole organism. They are the loud pleadings of a too impoverished blood. As regards thirst especially, the experiments of Cl. Bernard have shown that it arises from lack of water in the organism, and not from dryness of the pharynx. Of all the functions, general and local circulation exerts, perhaps, the greatest psychological influence, and its variations import the most from individual to individual, and according to the different moments, within the same individual.

Let us further recall to mind the organic sensations

* See particularly Bain: *The Senses and Intelligence*. Part I. Ch. II. and Maudsley: *Pathology of the Spirit*.

that arise from the state of the muscles : the feeling of fatigue, exhaustion, or its reverse ; finally the group of muscular sensations which, associated to the external sensations of sight and touch, play such a prominent part in the creation of our knowledge. Even reduced to itself alone, in its purely subjective form, muscular sensibility will reveal the degree of contraction or relaxation of the muscles, the position of our limbs, etc. I purposely omit the organic sensations of the genital apparatus ; I shall revert to it when studying the emotional bases of personality.

If the reader will conceive for a moment the multitude and diversity of the vital actions just cited in a general way, he will be able to form a certain idea of what must be understood by the expression : physical bases of personality. Constantly active, they make up by their continuity for their weakness as psychic elements. Hence, as soon as the higher forms of mental life disappear, they pass to the front rank. A clear example of this exists in dreams (whether pleasant or painful) aroused by organic sensations ; as night-mares, erotic dreams, etc. In these dreams, even with a certain degree of precision, we may assign to each organ the part that belongs to it ; the sensation of weight seems mainly attached to the digestive and respiratory organs ; the feeling of struggle and combat to affections of the heart. In more rare instances pathological sensations, unperceived during waking hours, will re-echo during sleep like premonitory symptoms. Armand de Villeneuve dreams that he is bitten in the leg by a dog ; and a few days later that same leg is attacked by a cancerous ulcer. Gessner in his sleep fancies that he is bitten in the left side by a serpent ; a little later on the very spot there developed an anthrax

of which he died. Macario dreams that he has a very sore throat ; he rises in normal health ; but a few hours later is attacked by an intense amygdalitis. A man sees in a dream an epileptic ; a short time afterwards he himself becomes one. A woman dreams that she speaks to a man who cannot reply to her, because he is dumb ; at her waking she herself has lost the power of speech.

In all these cases we take for facts those obscure incitations which, from the depths of the organism, reach the nervous centres, and which, amid all its turmoil and perpetual mobility, conscious life hides from us instead of revealing.

It is clear that the exclusive faith which psychology has so long accorded the mere data of consciousness, would throw into the shade the organic elements of personality ; but, on the contrary, in a professional way, physicians, as a matter of course, were expected to cling to it. The doctrine of the temperaments, old as medical science itself, ever criticized and ever remodeled,* is only a vague and fleeting expression of the principal types of the physical personality, such as furnished by observation, and with the main psychical traits that flow hence.

The few psychologists, accordingly, who have studied the problem of the different types of character, have sought their ground of support in this doctrine. Kant did so more than a century ago. If the determina-

* Henle has attempted recently (Anthropological Lectures, 1877, p. 103-130), to attach the temperaments to the different degrees of the activity, or *tonus*, of the sensitive and motor nerves. When this degree is at its lowest, we obtain the phlegmatic temperament. At a high degree, with a rapid exhaustion of nerves, we have the sanguine temperament. The choleric also supposes a high *tonus*, but with persistence in the nervous action. The melancholic temperament cannot be defined by the simple quantity of the nervous action ; it supposes a high *tonus*, with the tendency to emotions rather than to voluntary activity.

tion of the temperaments at any time could become scientific, the question of personality would be greatly simplified.

Until this takes place, the most relevant point will be, to rid ourselves of the purely preconceived notion, that personality is a mysterious attribute, dropped down from the skies, and without antecedents in nature. If we simply cast a glance at the animals that surround us, we shall have no difficulty in admitting, that the difference between horses and mules, between geese and ducks, their "principle of individuation," can only be derived from a difference of organization and of adaptation to environment, with the psychical consequences that thence result; and that in the same species the differences of one individual from another cannot originally be owing to any other cause. In the natural order of things there is no reason for making an exception of man; apart from the fact that in man the excessive development of intellectual and emotional faculties causes illusion, and hides the primitive origin.

Does physical personality exist in nature? [Understanding by physical personality the mere sense of a state of organized being; a mode of being where, by supposition, all consciousness, whether clear or obscure, actual or reproduced by some external circumstance, would be absent?]

Evidently not as regards the higher animals; physical personality, in the sense explained, can be posited only as a very artificial abstraction. It is probable, that this form of psychic individuality, consisting simply in the consciousness which the animal has of its own body, exists in very low species, yet not in the lowest.

In the latter,—*e. g.*, in multicellular individuals composed of cells entirely similar among themselves,—the constitution of the organism is to such a degree homogeneous, that each element lives apart by itself, and each cell has its own particular action and reaction. But their entirety no more represents an individual than six horses, drawing a carriage in the same direction, constitute one single horse. Here there is neither coördination nor consensus, but simply juxtaposition in space. If, with certain authors, we attribute to each cell the analogue of consciousness (which only would be the psychic expression of their irritability), we should obtain consciousness in a state of complete diffusion. From one element to the other there would exist a degree of impenetrability, that would leave the entire mass in the condition of living matter, without even an external unity.

In a higher order, however, for example in Hydras, observation is able to prove a certain consensus in the actions and reactions, and a certain division of work. Yet the individual is very precarious. Trembly, by aid of his scissors, out of a single individual was able to make fifty. Inversely, of any two Hydras we can make one; it is sufficient to reverse the smaller, before introducing it into the larger specimen, in a manner that the two endoderms touch and merge into each other. If allowed to venture an opinion on this obscure matter, I should say that this kind of adaptation of movements might denote a certain, temporary, unstable unity, subject to circumstances, yet, perhaps, not entirely destitute of a certain obscure consciousness on the part of the organism.

If we find that we are still too low, we may re-ascend the series (for every determination of this kind

is arbitrary), in order to fix the point at which the animal has only the consciousness of its organism, of what it undergoes and produces—or, has but one organic consciousness. This form of consciousness, in the pure state, perhaps, does not even exist; for, as soon as any rudiments of the special senses appear, the animal transcends the level of general sensibility. But, on the other hand, does general sensibility alone suffice to constitute a consciousness? It is known, that the human fœtus makes efforts to extricate itself from any inconvenient position, to escape the impression of cold or of painful irritation; yet, are all these merely unconscious reflexes?

I hasten away from all conjectures of this kind. One thing, at least, is incontestable; *viz.*, that organic consciousness—the consciousness which the animal has of its body and only of its body—in the greater part of animal existence exerts an enormous preponderance; that it stands in inverse ratio to the higher, psychic development; and that, everywhere and always, this consciousness of the organism is the basis upon which all individuality rests. Through it all is; without it there is nothing. Indeed, it would be impossible to imagine the contrary; for, do not external impressions—that first matter of all mental life—enter through the organism, and—what is still more important—are not instincts, feelings, aptitudes, proper to each species, to each individual, stamped and fixed by heredity in the organism—we know not how, but as proved by facts—with an unalterable solidity?

II.

If, accordingly, we admit that the organic sensations proceeding from all the tissues, organs, and movements produced—in a word, from all the states of the body—are in some degree and form represented in the *sensorium*; and if the physical personality be only their sum total, it follows that personality must vary as they vary, and that these variations admit of all possible degrees, from simple distemper to the total metamorphosis of the individual. Instances of “double personality” about which there has been great discussion, (we shall later speak of it,) are but an extreme case. By dint of patience and careful investigations we should find in mental pathology enough observations to establish a progression, or rather a continuous regression from the most transient change, to the most complete alteration of the ego.

It is an incontestable fact, that the ego exists only on the condition of continually changing. As regards its identity this is only a question of quantity. Its identity will persist as long as the sum of the states that remain relatively fixed is greater than the sum of the states that are added to or detached from this stable group.

For the present we have only to study the irregularities of personality that are immediately connected with organic sensations. Since, by itself, general sensibility has only a very feeble psychic value, it produces only partial disorders, except in cases where the alteration is total or sudden.

By way of a beginning, we shall here notice a state which can hardly be called a morbid state, yet pro-

bably is well-known to all, and consists in an alternate feeling of exuberant vitality or of depression, without apparent cause. In these states the usual tone of life changes, rises, or falls. In the normal state there is a positive "euphory"; neither comfort nor discomfort arise from the body. Often, on the other hand, the vital functions become exalted; activity superabounds and seeks to expend itself; everything seems easy and profitable. This state of well-being, at first entirely physical, is propagated to the whole nervous organisation, and arouses a multitude of pleasant feelings, to the exclusion of contrary ones. Everything looks bright. At other times the reverse will happen, as in states of disease, despondency, listlessness, impotence and—as consequences of grief—in fear, in painful and depressing feelings. At such times everything looks black. In either instance, however, there is no news, no event, in fact, nothing external to us, to justify this sudden joy or sadness.

Surely, in an absolute sense, it cannot be here said, that personality has been transformed. Relatively it has been so. The individual man has been changed, is not the same as before to himself, or better still, to those who know him. This, when translated into the language of analytic psychology, simply means, that this personality is constituted by elements, some relatively fixed, but others variable; that the variability having by far exceeded its average value, the stable portion has been affected, yet has not disappeared.

Now, if instead of disappearing merely to return after a brief delay to the normal state, we suppose that this change persists (a supposition that is daily realized); in other words, if the physical causes that induce this change are permanent, instead of being

transitory, in such instance there is formed a new physical and mental habitude, and the centre of gravity of the individual shows then a tendency to displacement.

This first change may then give rise to others so that the transformation is constantly on the increase. For the present I shall not discuss this subject at length. I simply wished to prove that from a normal state we may by imperceptible stages descend to the state of complete metamorphosis; or that it is purely a question of degree.

In studying the disorders of personality, it is impossible strictly to determine those that have their immediate cause in the perturbations of general sensibility, because these latter by a secondary action excite psychic states of a higher order (hallucinations, feelings, and morbid ideas). I shall limit myself to instances in which they appear to preponderate.

We shall find in the "*Annales médico-psychologiques*"* five observations, which the author has grouped under the title: "An aberration of the physical personality." Without caviling about the title, which, perhaps, conveys somewhat more than it ought, we are shown in the examples quoted how an unknown organic state, an alteration of the cœnæsthesis, *i. e.* of the organic sense, without any external cause, may produce a feeling of corporeal annihilation. "In the fullness of health, and in the possession of exuberant vitality and strength the person experiences an ever increasing sensation of weakness, to such a point, that every moment he has the fear of falling into syncope, and of ceasing to exist." Otherwise the sensibility remains intact; the patient eats with ap-

* Sept. 1878. 5e Série, tome XX, pp. 191-223.

petite, and if we attempt to oppose his will, he will react with the utmost energy; still he will keep repeating that he feels like one dying; that he is slowly passing away; that there are left to him only a few hours to live. Very naturally, upon this purely physical foundation at the same time there are grafted any number of delirious conceptions: one subject believes himself to be poisoned, another maintains that some demon has entered into his system, and is actually "sucking away his life," etc.

Let us, however, confine our attention to the immediate consequences of the physical state. We here encounter that state of despondency, already described, and known to everybody, yet here in a much more serious and stable form. The mental distemper increases in proportion and systematizes itself. The individual tends to be no longer the same. This forms a new stage toward the dissolution of the ego, although as yet far from having been reached.

This beginning of transformation, due to exclusively physical causes, is also met with in persons who maintain that they are enveloped in a veil or cloud, cut off from the external world, insensible. Others enjoy with delight the lightness of their bodies; will feel as if suspended in mid-air; believe they are able to fly; or have a feeling of heaviness either in the whole body, in certain limbs, or in a single limb that seems stout and heavy—all of which phenomena are naturally explained from disorders of the muscular sensibility. "A young epileptic at times felt his body so abnormally heavy, that he scarcely was able to support it. At other times he felt so light that he believed he did not touch the ground. Sometimes it seemed to him, that his body had assumed such

the body no longer yields sensations and where those that do arrive from the organs are equivalent almost to none at all; where both superficial and deep sensibility is extinguished—that in such a state the organism no longer excites those feelings, images, and ideas that connect it with higher psychical life. The organism is simply reduced to the automatic acts that constitute the habitude or routine of life, or properly speaking, it becomes “a machine.”

Strictly viewed, we are, indeed, allowed to assume, that the only personality in this example is the personality which recollects; we must nevertheless acknowledge, that it is of a very extraordinary nature, existing only in the past; and that, instead of calling it a person, it would be more correct to call it a memory.

What distinguishes the above-mentioned instance from those of which we shall speak elsewhere, is precisely this, that here the aberration is altogether physical, springs solely from body and bears solely upon the body. The old soldier did not believe himself to be *another* (Napoleon, for example, although the latter also had been at Austerlitz). The present case is as free as possible of intellectual elements.

The illusion of patients or convalescents, who believe themselves double, must also be referred to perturbations of general sensibility. At times there is pure and simple illusion without doubling, where the morbid state is projected outward, and the individual alienates a part of his physical personality. Such, are the cases of the patients, of whom Bouillaud speaks, who having lost the sensibility of half of the body, imagine to have beside them in bed an other person, or even a corpse. But when the group of organic

sensations of a morbid nature, instead of thus being alienated, clings to the normal, organic ego and for some time coexists with it, without fusion, then and for just this space of time the patient believes that he has two bodies. "A certain convalescent from a fever believed himself to consist of two individuals, of which one was in bed, while the other was walking about. Although without appetite, he ate a great deal; having, as he said, two bodies to feed."*

"Pariset, in his early youth having been affected by typhus, during an epidemic, remained several days in an extremely low state, verging on death. One morning there suddenly awoke a more distinct feeling of himself. He began to think, and seemed to experience a genuine resurrection; but, strange to say, at the same instant he had, or believed to have, two bodies; and these bodies seemed to him to be resting in two different beds. In so far as his soul was present in one of these bodies, he felt recovered, and enjoyed delightful repose. In the other body his soul suffered, and he argued with himself: Why am I so well in this bed and so ill and oppressed in the other? This thought preoccupied him for a long while. Pariset himself—a man most subtle in psychological analysis—has many times told me the detailed history of the impressions which at that time he experienced."†

In the above we possess two instances of double *physical* personality. Although as yet we are not far advanced in our study, the reader, at all events, is able to see, how the two cases referred to, when closely examined, are really unlike. The current term

* Leuret, *Fragments psychologiques sur la folie*, p. 95.

† Gratiolet, *Anatomie comparée du système nerveux*, Vol. II, p. 548.

"double personality" is but an abstraction. As soon as we translate it into concrete facts, into authentic observations, we shall only find diversity. Each case, as it were, asks for a particular interpretation; and *a priori* we certainly might expect one. Personality—as we maintain, and as we shall further attempt to prove—being a very compound complex, it clearly follows that its perturbations likewise must be multiform. Each case shows it as differently decomposed. Disease becomes a subtle instrument of analysis, and furnishes us experiences that are inaccessible by any other method. The difficulty is to interpret them satisfactorily; but even errors will only be transitory, since the facts which the future has in store will serve either to verify or rectify them.

III.

The part sustained by the physical personality as an element in the make-up of the complete personality is so important and has been so much neglected, often indeed intentionally, that too much light cannot be shed upon it. In this connection we may derive much profit from the consideration of a number of rare cases which psychology has overlooked, but which bring to the support of our thesis the supplemental evidence of facts which, although they are not more convincing, are at least more striking. I refer to cases of double monsters.

We must admit that the available data in such cases are very meagre. Nature does not multiply monsters, and among the seventy or eighty species pointed out by teratologists, the majority have no interest for us. Of double monsters, moreover, many

do not reach the adult age. - The anatomist and physiologist, consequently, may learn much from such prodigies; but this, it will be seen, is not the case with the psychologist. And, furthermore, really trustworthy observations on this subject seldom reach back further than a century. In everything beyond that date the marvellousness and vagueness of the descriptions recorded nullifies any value they might possess.

The ego, it has been repeatedly affirmed, is impenetrable; it forms in itself a complete, a perfectly circumscribed whole, the which is a proof of its essential unity. This assertion, as a matter of fact, is incontestable; but that impenetrability is merely the subjective expression of the impenetrability of the organism. One ego cannot be another ego, for the reason that one determinate organism cannot at the same time be a different organism. But if, through a concurrence of causes which we need not here enumerate, two human beings, whose condition dates back to the foetal stage, be united at some part of their bodies, while both their heads, the essential organs of human individuality, remain perfectly separate, the following condition of affairs will be presented: namely, each organism will no longer be completely limited in space, and distinct from every other organism; there will be a joint and undivided part common to both; and if, as we maintain, the unity and complexity of the ego are but the subjective expression of the unity and complexity of the organism, there will be of necessity, in the case now presented, a partial penetration of the one ego by the other, and there must exist a determinate element of psychic life that is held in common, and that cannot be said to belong

to an *I*, but must belong to a *We*. Each individual is thus a little less than an individual. And this has been fully corroborated by experience.

“From an anatomical point of view a double monster is always more than a unitary individual, and less than two; yet at times it approaches closer to unity, and again closer to duality. In the same way, from a physiological point of view, a double monster is always endowed with something more than unitary life, and with something less than two lives: but its double life may incline in the one case more to unity, or in the other more to duality.

“Regarding merely the phenomena of sensibility and of will, a monster composed of two almost complete individuals, united simply at a given part of their body, will be double, morally as well as physically. Each individual will have a sensibility and a will of his own, the effects of which will extend to his own body, and to his alone. It may even happen that the twins, while widely different in facial outlines, stature, and physical constitution, will be no less so in point of character and degree of intelligence. At the same instant the one will be merry, and the other sad; one will be awake, while the other will be asleep; one will want to walk while the other wishes to rest; and from this conflict of two wills, animating two bodies indissolubly bound together, certain movements may arise that are wholly without results, that will be neither resting nor walking. These two human halves may quarrel, or even come to blows. . . . And thus their moral duality, the consequence of their physical duality, may be demonstrated by a hundred proofs. At the same time, however, since there exists a point of junction in the double body, situated at the line of

division of the two component individuals, and common to both, other phenomena, less numerous though they be, show in them a beginning of unity.

"Impressions made upon the region of union, especially if made at its central point, are perceived at the same time by both brains, and both are able to react upon the impressions in the same manner. . . . Let us add, that although peace may often be ruptured between the twins, still there nearly always prevails between them a harmony of feelings and desires, sympathy and reciprocal attachment, the full extent of which it is impossible to comprehend without having read the entire evidence

"The same, and also different, phenomena are present where, by a still more intimate union, we find two heads upon one body, and with but a single pair of legs. Anatomical examination proves that in such beings each individual possesses for himself one side of the common body, and one of the two legs. The observation of physiological and psychological phenomena fully corroborates this singular result. Impressions made at any point along the axis of union, will be perceived at the same time by both the heads; beyond and at a distance from the axis impressions are perceived by but one head; and what is true of the sensations is true of the will. The right brain is the seat of perception for the right leg alone, and it alone will act upon the right leg; and so the left brain alone acts upon the left leg, so that the act of walking will result from movements executed by two limbs belonging to two different individuals, and co-ordinated by two distinct wills.

"Finally, in parasitic monsters, where the organization almost becomes unitary, all vital acts, sensa-

tions, and manifestations of will are performed almost exactly as they are in normal beings. The smaller of the two individuals, having become an accessory and inert portion of the larger, exerts but a feeble influence upon it, limited to a very small number of functions."*

To these general traits we shall add a few details borrowed from the most remarkable instances.

We possess numerous records concerning Helen and Judith, a twin female monster, born at Szony (Hungary) in 1701, died at Presbourg at the age of twenty-two years. The bodies were placed almost back to back, united in the sacro-pelvic region and part of the loins. The sexual organs were double externally, but with a single vulva hidden between the four thighs; there were two intestines terminating in a single anus. The two aortas and two inferior venæ cavæ were united by their extremities, and thus formed two large and direct communications between the two hearts, and hence a semi-communion of life and functions. "The two sisters had neither the same temperament nor the same character. Helen was taller, prettier, more agile, more intelligent, and of a sweeter disposition. Judith, at the age of six years was attacked by paralysis, which retarded her growth and development; her temperament was consequently more sluggish. She was slightly malformed, and had a somewhat difficult utterance. Nevertheless, like her sister, she spoke Hungarian, German, French, and even a little English and Italian. Each seemed to feel a tender affection for the other, although in their infancy they sometimes had quarrelled, and even come

* I. Geoffroy Saint-Hilaire, *Histoire des Anomalies*, Vol. III, p. 373. The monster called "Home's epicome" (a monstrosity in which a second head grew from the first) had a parasitic head that only presented a very imperfect delineation of the normal life.

to blows. The needs of nature were felt simultaneously except in the case of urination. They had simultaneously been afflicted with measles and small-pox ; and if other maladies attacked either one, the sister would experience at the same time internal discomfort and keen anxiety. Finally Judith was attacked by a disease of the brain and lungs. Helen, after suffering for several days from a low fever, suddenly lost her strength, yet preserving the clearness of her mind and the faculty of speech. After a brief illness she succumbed a victim, not to her own, but to her sister's maladies. Both expired at the same moment."

The Siamese twins, Chang-Eng, born in 1811 in the kingdom of Siam, were united from the navel to the xiphoid appendix. After a description of their external peculiarities, I. Geoffroy Saint-Hilaire adds : "The two brothers, also in their other functions [other than respiration and arterial pulsation], evince a remarkable concordance, though not absolutely constant, as people have been pleased to maintain, and as Chang and Eng themselves have stated to persons who were satisfied with addressing them a few vague questions. There is, doubtless, nothing stranger than the contrast of an almost complete physical duality and an absolute moral unity ; but, at the same time, nothing is more contrary to sound theory. I have made careful observations, and gathered together every information that could enlighten me concerning the value of the above too frequently repeated assertion ; and I have found, that in the conflict between the disregarded principles of theory, and all the psychological assertions of which the unity of the Siamese twins has formed the inexhaustible topic, the facts—as was to be expected—have declared themselves in favor of the former. Twins

formed according to two almost identical types; inevitably submitted during their life to the influence of the same physical and moral circumstances; similar in point of organisation and education—the Siamese brothers became two beings whose functions, actions, words and even thoughts, are almost always concordant, conceived and produced parallel to each other. . . . Their joys and griefs are common. In these twin-souls the same desires are manifested at the same instant; a phrase, begun by the one is often finished by the other. But all these concordances only prove parity, not unity. Other twins in the normal state present analogies of this kind, and, doubtless would reveal even more remarkable ones, if during their whole life they had always seen the same objects, felt the same sensations, enjoyed the same pleasures, and suffered the same griefs. . . .”^{*} As regards the Siamese, twins I may add that with advancing age and through the effect of circumstances their differences of character became more marked, and that one of the latest observers described one of the two brothers as morose and taciturn, the other as gay and cheerful.

The subject of the present work, however, is not the psychology of double monsters, since they only figure as examples of the deviations of physical personality. I shall, accordingly, only recall to mind the recent case of Milie and Christine, in whom the sensibility of the inferior limbs is common. The two spinal cords must in consequence form a genuine commissure at the level of the point of union.

The civil and ecclesiastical laws, which are interested in this problem under several heads, (questions

^{*} As regards further details, see the above-quoted work Vol. III, p. 90, and following.

of civil condition, marriage, right of succession, baptism, etc.,) have not hesitated to acknowledge two persons where two distinct heads existed, and justly so, although practically certain perplexing instances might be met with. The head in man being the true seat of personality—the locality in which the synthesis of the latter takes place—it may upon the whole be said to represent the individual. Later on we shall see in descending the scale of animal existence that this point is more doubtful. But, if the question is discussed scientifically, it is impossible in double monsters to consider each individual as complete.

I shall not weary the reader with entirely useless comments, since the facts speak for themselves. If the reader carefully examines the preceding passages, he will convince himself that, even where the personalities are the most distinct, there exists a complication of organs and functions to such an extent that each cannot be itself except on condition of being more or less the other, and itself being conscious of the fact.

The ego, accordingly, is not an entity acting where it chooses or as it pleases; controlling the organs in its own way, and limiting its domain according to its own wish. On the contrary, it is a resultant, even to such a degree that its domain is strictly determined by the anatomical connections with the brain, and that at one time it represents an entire body, less an undivided part, and at another time the half of a body, and in parasitic monsters such a limited domain, that it does not suffice to support life, and accordingly is expelled prematurely.

IV.

Recurrent Twinning

In order to prove once more and in another manner that the principle of individuation is the organism; that it is such without restriction, immediately through the organic sensations, but mediately through the emotional and intellectual states, of which we shall speak later; let us examine what takes place in cases of twins. Psychology has not concerned itself about the latter, any more than about cases of double monsters, while at the same time modern biologists furnish a number of very curious data.

In the first place, we must recall to mind that twins represent on the average of births about 1 in 70. The cases of triplets or quadruplets are very rare, not more than 1 in 5000, and 1 in 150,000 respectively; to mention instances of these would uselessly complicate our researches. Let us further remember, that twins are of two species. Either each of them is germinated from a distinct ovule, in which case they may be either of the same or of a different sex; or they may have issued from two germinative spots in the same ovule, and then they are enveloped within the same membrane and are invariably of the same sex. The latter instance alone yields two personalities that are strictly speaking legitimately comparable.

Leaving aside animals, we shall abide by man and take the problem in all its complexity. It is evident, that since the physical and moral state of the parents is the same for both of the twin individuals, a cause of difference has thus been removed at the very moment of procreation. As their development has for a starting-point the materials of the same fecundated

ovule, there will exist a great probability of extraordinary likeness in the physical constitution, and consequently, according to our thesis, in their mental constitution also. Let us now glance at the facts that are in our favor; and afterwards consider objections and exceptions.

The perfect resemblance of twins is a matter of common observation. Since remote antiquity this topic has furnished subject-matter to the humorous poets, and later it has more than once been used by modern novelists. But writers have generally limited themselves to external resemblances, resulting from stature, form, face, voice, etc. But, there are other much deeper resemblances. Even long ago physicians had observed that most twins also present extraordinary agreement of tastes, aptitudes, faculties, even of fates. Recently Mr. Galton has made an inquiry on this subject, issuing lists of questions, to which about eighty answers were returned, thirty-five with the addition of minute details. Mr. Galton's aim, however, was totally different from our own. Through his researches upon heredity, he wished to determine by a new method the respective parts played by nature and education; but among his material is much that is of profit to us.*

Mr. Galton reports a number of anecdotes similar to those which have been long current: a sister taking two music-lessons daily, in order to leave her twin-sister at liberty; the perplexities of a certain college-janitor, who, when a twin came to see his brother, did not know which of the two he ought to allow to

* They will be found under the title "History of Twins" in his book *Inquiries into Human Faculty and its Development* (pp. 216-242), London: Macmillan, 1883.

depart, etc. Others evince a persistent resemblance under circumstances scarcely favorable to preserve it. "A. was again coming home from India, on leave ; the ship did not arrive for some days after it was due ; the twin brother B. had come up from his quarters to receive A., and their old mother was very nervous. One morning A. rushed in saying, 'O mother, how are you?' Her answer was, 'No, B., it's a bad joke ; you know how anxious I am !' and it was a little time before A. could persuade her that he was the real man." (p. 224.)

But that which relates to mental organisation has a still greater interest to us. "One point which shows the highest degree of resemblance between twins," says Galton, "is the similarity in the association of their ideas. No less than eleven out of the thirty-five cases testify to this. They on the same occasion make the same remarks, begin singing the same song at the same moment, and so on : or one would commence a sentence, and the other would finish it. An observant friend graphically described to me the effect produced on her by two such twins whom she had met casually. She said : 'Their teeth grew alike, they spoke alike, and together, and said the same things, and seemed just like one person.' One of the most curious anecdotes that I have received concerning this similarity of ideas, was that one twin, A, who happened to be at a town in Scotland, bought a set of champagne glasses which caught his attention, as a surprise for his brother B ; while at the same time B, being in England, bought a similar set of precisely the same pattern, as a surprise for A. Other anecdotes of a like kind have reached me about these twins." (*Loc. cit.* p. 231.)

The nature and evolution of physical and mental maladies will also furnish very convincing facts. The latter only may interest psychology, but the former reveal a similarity in the innermost constitution of the two organisms which sight cannot discover in the form of external resemblances.

"I have attended professionally," says Trousseau, "a case of twin-brothers so marvellously like each other, that I was unable to distinguish between them unless I saw them side by side. This physical resemblance extended still further; they had an even still more remarkable pathological resemblance. One of them, whom I saw in Paris, when he happened to be suffering from rheumatic ophthalmia, said to me: 'At this very moment my brother must be suffering like me.' And as I strongly protested against such an idea, a few days later he showed me a letter that he had just received from his brother, then at Vienna, and who wrote: 'I have got my ophthalmia, you must have yours.' However strange this may appear, the fact nevertheless remains incontestable. It was not a circumstance related to me, but an actual fact that came within my own experience, and during my practice I have witnessed other remarkable cases of this kind."* Galton furnishes several examples of which we will cite only the following: "Two twin-brothers, quite alike, warmly attached to each other, and having identical tastes, had both obtained government clerkships. They kept house together; one of them sickened of Bright's disease and died of it; the other sickened of the same disease and died seven months later" (p. 226).

We might fill whole pages with analogous instances.

* Trousseau, *Clinique Médicale*, Vol. I, p. 253. "Leçon sur l'asthme."

In the case of mental diseases the same sympathy is observed; a few examples of which will suffice. Moreau (de Tours) records a case of twins, physically alike, who were attacked by insanity. In both patients "the predominant ideas are absolutely the same. Both believe themselves to be the objects of imaginary persecutions. The same enemies have sworn their ruin, and employ the same means to accomplish their ends. Both are subject to hallucinations of hearing. They never address a word to any one whatever, and with difficulty return an answer to questions. They always keep aloof from each other, and do not even communicate between themselves. An extremely curious fact that has frequently been verified by the attendants of the ward and also by ourselves is the following: from time to time, at irregular intervals, of two, three, or several months, without apparent cause and through an entirely spontaneous caprice of their malady, there occurs a very marked change in the condition of the two brothers. Both, at the same time, often on the very same day, emerge from their state of stupor and habitual prostration; they make the same complaints and appeal to the physician to immediately restore them to freedom. I have seen this rather strange fact reproduce itself even when they were separated from each other by a distance of several miles; the one being at the Bicêtre, the other living on the farm Sainte-Anne."*

The *Journal of Mental Science* † has more recently published a case of insanity in twins, where we see

* *Psychologie morbide*, p. 172. We also find an extraordinarily curious case in the *Annales médico-psychologiques*, 1863, Vol. I, p. 312. On the question of twins may be consulted the special work of Kleinwaechter: *Die Lehre von den Zwillingen*, Prague, 1871.

† April 1883, and Ball, *De la folie gémellaire*, in *L'Encéphale*.

two sisters, resembling each other very closely in features, manners, language, and intellectual disposition, "to such a point that it would be very easy to mistake one for the other," and who, placed in different wards of the same asylum, with no possibility of seeing each other, presented exactly the same symptoms of mental alienation.

We must nevertheless anticipate certain objections. There are twins of the same sex, who are dissimilar, and although statistics do not tell us in what proportion true twins (issues of the same ovule) present these differences, it is sufficient if it takes place only in a single case to be worthy of a particular discussion. Elsewhere* we have enumerated the numerous causes that in every individual tend from conception until death to produce variations, that is, certain marks peculiar to an individual, and differentiating it from every other. Here, as we have said, a certain category of causes must be eliminated: those which proceed immediately from the parents. But the impregnated ovule also represents ancestral influences,—4, 12, 28 possible influences according as we ascend to grandparents, great-grandparents, great-great-grandparents, etc. We can know only through experience which of them prevail; and to what extent. As a fact, in this case it is the same ovule which serves to produce two individuals; but nothing proves that everywhere and always there was made a rigorously equivalent division between both in regard to the quantity and quality of the materials. The eggs of all animals not only possess the same anatomical composition, but chemical analysis can only reveal in them a few infinitesimal inequalities; still, the

* *L'hérédité psychologique*, 2nd edition, part II, ch. IV.

one produces a sponge, the other a man. This apparent resemblance, accordingly, must hide profound differences, although it escapes our most subtle means of investigation. Do they arise from the nature of the molecular movements, as certain authors think? We may suppose anything we please, on condition that we perfectly understand that the egg itself is already a complex thing, and that any two individuals emerging from it, strictly speaking, cannot be similar. Our perplexity only arises from our ignorance of the processes according to which the primitive elements group themselves in order to constitute each individual, and in consequence, of the physical and psychic differences which thence result. Some of Galton's correspondents have reported the curious fact of certain twins who were "complementary to each other." "There is," writes the mother of the twins, "a sort of reciprocal interchangeable likeness in expression that often gave to each the effect of being more like his brother than himself."—"A fact struck all our school contemporaries (writes a senior wrangler of Cambridge) that my brother and I were complementary, so to speak, in point of ability and disposition. He was contemplative, poetical and literary to a remarkable degree. I was practical, mathematical, and linguistic. Between us we should have made a very decent sort of a man." (pp. 224 and 240.) The physical and mental capital seems to have been divided between them not by equality but by equivalence.

If the reader carefully considers how complex the psychic organization is in man; how improbable it is, by the very reason of this complexity, that two persons should be the repetition of each other, although twins approach it to an astonishing degree, the reader, as I

maintain, will irresistibly be induced to think, that a single perfectly verified fact of this kind proves more than even ten exceptions, and that the moral resemblance is but the correlative of the physical resemblance. If by an impossible hypothesis any two men were created in such a manner that their respective organisms were identical as to constitution ; that their hereditary influences were rigorously alike ; if, by a still greater impossibility, both received the same physical and moral impressions at the same moment, there would not be any other difference between them than that of their position in space.

In closing this chapter, I feel somewhat ashamed of having accumulated so many data and proofs to establish a truth so evident to my eyes as the proposition : As the organism, so the personality. I should have hesitated greatly to do it, if it had not been too easy to show, that this truth has been forgotten and disregarded rather than denied ; and that writers have almost always been contented to mention it under the vague law of the influence of the physical over the moral nature. ✓!!!

The facts that up to this point have been studied cannot alone lead to a conclusion : they only pave the way for it. They have shown that, reduced to its last elements, physical personality presupposes the properties of living matter, and their co-ordination ; that, in the same manner as the body is only the organized and co-ordinated sum of all the elements that constitute it, so also the physical personality is only the organized and co-ordinated sum of the same elements as psychic factors. They express their nature and agencies, but nothing more. The normal state, the teratological cases, the resemblance of twins have

See that
Personality

proved it. The aberrations of the physical personality, or as M. Bertrand ingeniously calls them,* "the hallucinations of the sense of the body" contribute an additional amount of evidence. But there are deviations of the human person, arising from other causes, and produced by a more complicated mechanism, which we will now proceed to investigate.

* *De l'aperception du corps humain par la conscience.* p. 269 et seqq.

CHAPTER II.

EMOTIONAL DISORDERS.

I.

manifestation in behavior

BEFORE proceeding farther let us remind the reader once for all, (and this also applies to the intellectual derangements,) that we are still continuing our study of organic conditions, but under a different aspect. (The desires, feelings, passions that impart to character its fundamental tone, have their roots in the organism and are predetermined by it.) The same applies to even the highest intellectual manifestations. Still, as the psychic states here play a preponderating part, we shall treat them as the immediate causes of the changes of personality, without forgetting, however, that these causes are in their turn effects.

Without presuming to give a rigorous classification of the emotional manifestations, which we have not to follow up in detail, we will reduce them to three groups of which the psychological complexity goes on increasing, while the physiological importance decreases. They are: (1) the tendencies connected with the preservation of the individual (nutrition, self-defense); (2) those relating to the preservation of the species; (3) the highest of all, those which presuppose the development of intelligence (moral, religious, æsthetic, and scientific manifestations, ambition in all its forms, etc.) If we consider the development of the individual, we shall find that

it is in this chronological order the sentiments appear. We see it in a marked degree in the evolution of the human species. Inferior human races—with whom education does not correct nature by furnishing the accumulated result of the work of centuries—never pass beyond the preservation of the individual and of the species, or at most exhibit only a slight trace of the sentiments belonging to the third group.

The emotional states connected with nutrition constitute with the child in its early infancy the only elements, as it were, of its nascent personality. Thence arise comfort and peevishness, desires and aversions. It constitutes that sense of the body about which we have spoken so much, arrived at its highest psychic expression. As natural causes, too manifest to need further explanation, cause nutrition almost exclusively to predominate with the child, it follows that the child has, and can only have, a personality almost entirely nutritive, that is, the most indefinite and lowest form of personality. The ego, for him who does not regard it as an entity, can here only be a compound of extreme simplicity.

As we grow up from infancy the preponderating rôle of nutrition will diminish; still, it will never completely lose its rights, because among all the properties of the living being it alone remains fundamental. Thus it happens that important alterations of personality are associated with its variations. When nutrition is diminished, the individual feels himself depressed, weakened, contracted; when it is increased, he feels himself excited, strengthened, expanded. Among all the functions whose harmony constitutes this basic property of life, the circulation seems to be that one of which the sudden variations have the

greatest influence upon the emotional states and display themselves by an immediate counter-stroke ; but let us leave aside detailed conjectures, in order to investigate the facts.

In the states known under the names of hypochondria, lypemania, melancholia (in all its forms), we find alterations of personality that imply all possible degrees, including complete metamorphosis. Among these different morbid states physicians have marked certain clinical distinctions, but these are not very important here. We can include them within a common description. In such morbid states there is a feeling of fatigue, of oppression, anxiety, depression, sadness, absence of desires, permanent lassitude. In the most serious cases, the very source of the emotions is completely dried up : "The patients have become insensible to everything. They have no longer any affection for parents or children, and even the death of persons that were dear to them, would leave them perfectly cold and indifferent. They cannot weep, and nothing moves them except their own sufferings."* As regards activity, there is torpor, loss of power to govern the actions or even the will, overpowering inaction for many hours, in one word, that "aboulia" (lack of will) of which we studied all the forms in treating of the diseases of the will. As regards the external world, the patient, without being under an hallucination, finds that all his relations to it are changed. It seems as if his habitual sensations had lost their usual character. "All that surrounds me," said one of them, "is still as formerly, and yet a change must have been effected ; things still have their old forms, I can see them perfectly well,

* Falret, *Archives générales de médecine*, December, 1878.

and yet they have also changed a great deal." One of Esquirol's patients complains that his existence is incomplete. "Each of my senses, each part of myself is, as it were, separated from me, and can no longer give me any sensation ; it seems to me that I never actually reach the objects that I touch." This morbid state, due sometimes to cutaneous anæsthesia, may increase to such an extent "that it seems to the patient that the real world has completely vanished out of sight, or is dead, and that there only remains an imaginary world, in which he is afraid of dwelling."* To this picture we may add the physical phenomena ; such as disturbances of the circulation, of the respiration, and of the secretions. The emaciation of the subjects may become considerable, and the weight of the body very rapidly diminish during the period of depression. The respiratory function is impaired, the circulation reduced, and the temperature of the body is lowered.

By degrees these morbid states take form, organize themselves, concentrate themselves in some wrong conception, which—having been excited by the psycho-physiological mechanism of association—in its turn becomes a centre of attraction toward which everything converges. One patient will say that his heart has become petrified, another that his nerves are like burning coals, etc. These aberrations have innumerable forms, and vary according to individuals. In extreme cases the individual will doubt his own existence, or deny it. A young man, while maintaining that he had been dead for two years, expressed his perplexity in the following words : "I exist, but out-

* Griesinger, *Traité des maladies mentales*. Fr. trans. p. 265. *L'Encéphale*, June, 1882.

side of real material life and despite myself, for nothing has really killed me. Everything in me is mechanical, and takes place unconsciously." Is not this contradictory situation, in which the subject claims to be alive and dead at the same time, the logical and natural expression of a state in which the old ego and the new, vitality and annihilation seem to keep in equilibrium?

Still, the psychological interpretation of all these cases is not doubtful. They are organic disturbances, the first result of which is to depress the faculty of feeling in general, and the second effect is to pervert it. In this manner there is formed a group of organic and psychic conditions that tend profoundly to modify the constitution of the ego in its inmost nature, because they do not act after the manner of sudden emotions, the effect of which is violent and superficial, but by slow, silent actions of unconquerable tenacity. At first this new mode of being seems strange or extraneous to the individual and outside of his ego. By slow degrees, however, and through habit, this new feeling insinuates itself into and becomes an integral part of the ego, changes its constitution, and when of an overpowering nature, entirely transforms it.

In perceiving how the ego is dissolved, we understand also how it is made. In most instances, doubtless, the alteration is only partial. The individual, while seeming to become another to himself, and to those who know him, still preserves a fundamental feeling of himself. In fact, complete transformation can only be a very rare occurrence; and we may besides observe, that whenever a patient maintains that he is changed or transformed, he is actually right, notwithstanding the denials or hilarity of his friends. He

really cannot feel otherwise, because his consciousness is but the expression of his organic state. Subjectively he is not the sport of any illusion ; he is merely what he ought to be. On the contrary it is the unconscious unacknowledged hypothesis of an independent ego,—existing by itself as an unalterable entity,—which instinctively urges him to believe, that this change is only an external event, a strange or ridiculous garb in which his personality has been wrapped, while in reality the change is internal, and implies certain losses and acquisitions in the substance of the ego itself.

* * *

The counterpart of these partial alterations is met with in cases where the ego is exalted and elated, and ascends extremely far above its normal tone. Instances of this are found at the beginning of general paralysis, in certain cases of mania, during the excited period of so-called "cyclic" insanity. It forms altogether the inverse of the previous picture. Here we have a feeling of physical and moral well-being, superabundant strength, exuberant activity, which vents itself with reckless prodigality in speeches, projects, enterprises, and incessant, fruitless journeys. To this super-excitation of the psychic life corresponds an over-activity of all the organic functions. Nutrition increases—often at an exaggerated rate—respiration and circulation are quickened, the genital function is aroused ; and notwithstanding a great expenditure of force the individual does not feel any fatigue. Afterwards these several states group themselves, become unified and finally to a considerable extent transform the ego. One individual may feel a herculean strength, and be able to lift prodigious weights, procreate thou-

sands of children, race with a railway-train, etc. Another subject is an inexhaustible mine of learning, imagines himself a great poet, artist, or inventor. At times the transformation approaches still nearer to complete metamorphosis; and then the subject, entirely engrossed with the feeling of his matchless power, proclaims himself pope, emperor, god. "The patient," as Griesinger justly observes, "feeling proud, bold, cheerful; discovering in himself an unwonted freedom in all his decisions; and moreover, feeling the super-abundance of his thoughts, is naturally prone to ideas of grandeur, rank, riches, or some great moral or intellectual power, which alone can have the same degree of freedom, of thought, and will. This exaggerated idea of force and of freedom must nevertheless have a motive; there must exist in the ego something that corresponds to it; the ego must momentarily have become entirely another; and the patient knows no other way of expressing this change, than by proclaiming himself a Napoleon, a Messiah, or some other exalted being." *

It would be a mere waste of time to endeavor to show, that this transformation of the ego, whether partial or complete, momentary or permanent, is of the same nature as in the preceding instances, and that it assumes the same mechanism, with this sole difference that here the ego is dissolved in the inverse sense, not through defect but through excess.

These alterations of personality into more or less, this metamorphosis of the ego, which either raises or lowers it, would be even more remarkable if in the same individual they followed at regular intervals. As a matter of fact, an instance of this very frequently

* *Op. cit.*, p. 333.

happens in so-called "cyclic" madness, or insanity in double form, essentially characterized by successive periods of depression and excitement, following each other at regular intervals, and in some patients with occasional intermissions of lucidity. And then the following strange fact may be witnessed. Upon what might be called the primitive and fundamental personality, of which there still remain a few greatly altered fragments, are grafted by turns two new personalities—not only quite distinct, but which wholly exclude each other. Here it is indispensable to give a summary of certain observations on the subject.*

A woman, observed by Morel, had been abandoned by her mother to a life of vice from the age of fourteen years. "Later in her career, a prey to every pang of shame and wretchedness, she had no other resource than to enter a house of ill-fame. A year afterwards she was rescued from it and placed in the convent of the Good Shepherd, at Metz. There she remained for two years, and the too intense reaction in her feelings which occurred resulted in the outburst of a religious mania, which was followed by a period of profound stupidity." It is then, while under the treatment of the physician, she passes through alternate periods during which she imagines herself by turns a prostitute and a nun. On coming out of the period of stupidity, "she resumes her work with regularity, speaks with becoming propriety; but at the same time arranges her toilet with a certain coquetry. The latter tendency thereupon increases, her eyes become sparkling, her glances lascivious, she dances and sings.

* They will be found *in extenso* in Ritti, *Traité clinique de la folie à double forme*. Paris, 1883, observations XVII, XIX, XXX, and XXXI.

Finally the obscenity of her utterances and her erotic solicitations necessitate her solitary confinement. She gives herself the name of Mme. Poulmaire, and furnishes the most cynical details of her former state of prostitution." Then again after a period of depression "she becomes meek and timid ; and evinces the most scrupulous decency in her demeanor. She arranges her toilet with extreme severity. The intonation of her voice is peculiar. She speaks of the convent of the Good Shepherd at Metz and of her desire to return there ; she now calls herself Sister Martha of the Five Wounds, Theresa of Jesus, Sister Mary of the Resurrection. She refrains from speaking in the first person : says to the sisters, Take *our* dress, this is *our* pocket-handkerchief. Nothing now belongs to her personally (according to the rule of Catholic convents.) . . . She sees angels who smile upon her, and has moments of ecstasy."

In another instance reported by Krafft-Ebing, a neuropathic patient of insane parentage, "was during the period of depression disgusted with the world, preoccupied with the thought of approaching death, and of eternity, and then thought of becoming a priest. During the maniacal periods he is turbulent, studies furiously, will not hear a word more about theology, and only thinks of practicing medicine."

An insane woman of Charenton, of a very distinguished and highly gifted mind, would change "from day to day in person, condition, and even in sex. At one time she would be a princess of royal blood, betrothed to an emperor ; at another time a woman of the people and democratic ; to-day married and enceinte ; to-morrow once more a maiden. She would even at times believe herself to be a man ; and one

day she imagined herself a political prisoner of importance, and composed verses upon the subject."

Finally in the following case we find the complete formation of a second personality. "A lunatic, an inmate of the asylum at Vanves," says Billod,* "about every eighteen months would let his beard grow and introduce himself to the whole house, quite changed in dress and manners, as a lieutenant of artillery, named Nabon, recently arrived from Africa, to become a substitute for his own brother. He would say, that before leaving his brother had imparted to him information respecting everyone; and at his arrival he would ask and obtain the honor of being introduced to each person present. The patient thereafter for several months remained in a state of marked exaltation, adapting his whole conduct to his new individuality. At the expiration of a certain time, he would announce the return of his brother, who, as he said, was in the village and would come to replace him. Then one day he would have his beard shaved off, change his dress and manner, and resume his real name. But then he would exhibit a marked expression of melancholy, walking along slowly, silent, and solitary, usually reading the *Imitation of Jesus Christ*, and the *Fathers of the Church*. In this mental state—a lucid one perhaps, but one that I am far from considering as normal—he would remain until the return of the imaginary Lieutenant Nabon."

The two first of the above-mentioned cases conclusively show an exaggeration, a considerable augmentation of what takes place in the normal state. The ego of all of us is made up of contradictory tendencies, such as virtues and vices, modesty and pride,

* *Annales médico-psychologiques*, 1858, according to Ritti *op. cit.*, p. 156.

avarice and prodigality, desire for rest and craving for action, and many others. In the ordinary state these opposite tendencies are balanced, or, at least, that which prevails is not without a counterpoise. But here, through very well determined organic conditions, there is not only an impossibility of equilibrium, but a group of tendencies is hypertrophied at the expense of the antagonist group, which is atrophied; then a reaction takes place in an inverse sense, so that the personality, instead of consisting of those average oscillations of which each represents one side of human nature, passes constantly from one excess to the other. Incidentally we may observe that these diseases of personality consist in a reduction to a more simple condition. But this is not the place to insist on this point.

II.

Nutrition being less a function than the basic property of all that lives, it follows that the tendencies and feelings that are connected with it have a very general character. The same does not apply to the preservation of the species. This function, connected with a determinate part of the organism, reveals itself by feelings of a very precise character. Accordingly it is highly adapted to the purpose of verifying our thesis. For if personality is a compound, varying according to its constituent elements, a change in the sexual instincts will change it, a perversion will pervert it, an inversion will invert it; and this is just what occurs.

In the first place, let us call to mind certain facts which are well known, although the conclusions which they would seem to impose are not generally drawn

from them. At the period of puberty, a new group of sensations, and in consequence new feelings and ideas are developed. This afflux of unaccustomed psychic states—stable, because their cause is stable, co-ordinate among themselves because their source is the same—tends profoundly to modify the constitution of the ego. It feels itself undecided, tortured by a vague, latent distemper, the cause of which is not understood; by degrees these new elements of the moral life are assimilated by the old ego, enter into it, become a part of it, but at the same time make it a different one. The ego is changed; a partial alteration of the personality has been accomplished, the result of which has been to constitute a new type of character—the sexual character. This development of an organ and its functions with their train of instincts, images, sentiments, and ideas, has produced in the neutral personality of the child a differentiation, has made of it a male or a female, in the complete sense. Until this period there had existed only the foundation of it, by virtue of which, however, the change could be effected without a sudden shock, without a break between the past and the present, and without a complete change of personality.

If now we pass from the normal development to exceptional and morbid cases, we find certain variations or transformations of personality connected with the state of the genital organs.

The effect of castration upon animals is well known. It is not less marked upon man. Leaving aside a few exceptions (some of which are recorded in history), eunuchs represent a deviation from the psychic type. According to Maudsley, they are selfish, cunning, deceitful, liars, destitute of moral sentiment, and fur-

thermore exhibit marked impairment of intellectual vigor.* Whether this moral degradation directly results from castration, as certain authors maintain, or indirectly from an equivocal social position, matters little, for our thesis: whether directly or indirectly, the cause remains the same.

With hermaphrodites experience corroborates what might have been predicted *a priori*. With the appearances of one sex they present some of the characteristics of the other; but far from combining both functions they only exhibit incomplete organs usually destitute of sexual function. Their moral character is sometimes neutral, sometimes masculine, and at other times feminine. Abundant instances of this are found in writers who have studied the question.† “Sometimes the hermaphrodite, after showing a lively inclination for women, manifests through the sudden descent of the testicles completely opposite instincts.” In a recent case observed by Dr. Magitot, an hermaphrodite woman evinced alternately very pronounced feminine and masculine tastes. “In general the emotional faculties and the moral dispositions experience the counter-effect of the defective conformation of the organs.” Still, as Tardieu observes, “it is only fair that we should make a large allowance for the influence of the habits and occupations that the mistake made as to their real sex has forced upon the individuals. Some males who from the first had been dressed, educated, employed, and sometimes married as females, retained the thoughts, habits, and manners of women. Such was the case of Maria Arsano, who died at

* *Pathology of Mind*, p. 454.

† As regards the facts, see Isid. Geoffroy Saint-Hilaire: *Histoire des anomalies*, t. II. p. 65 and following. Tardieu and Laugier, *Dictionnaire de médecine*, art. “Hermaphrodisme,” etc.

eighty years of age, and who in reality was a man, but whose character had been rendered effeminate by habits."

It is not my intention to review the perversions or aberrations of the sexual instinct,* each of which stamps its mark upon personality, affects it more or less either transiently or permanently. As a culminating point of these partial alterations we have the total transformation, the change of sex. There are numerous instances of this, and the following may serve as a type. Lallemand relates "the fact of a patient, who believed himself to be a woman, and used to write letters to an imaginary lover. At the autopsy it was discovered that hypertrophy with induration of the prostate gland had taken place, and impairment of the ejaculatory ducts." It is probable that in many cases of this kind perversion or abolition of the sexual sensations has occurred.

I must, however, point out a few exceptions. Several detailed observations, (which may be found in Leuret, *Fragments psych.* p. 114 and following,) show us individuals, who assume the carriage, the habits, the voice, and when they are able, the dress of the sex they imagine themselves to belong to, yet without exhibiting any anatomical or physiological anomaly of the sexual organs. In cases of this kind the starting-point of the metamorphosis must have its seat elsewhere. And this can only be in the cerebro-spinal organ. In fact, we may observe, that whatever has been said of the sexual organ as constituting or modifying personality must not be understood simply of

* For the complete exposition of this question see the article of Dr. Gley "Sur les aberrations de l'instinct sexuel," in the *Revue philosophique* for January, 1884.

the organ itself as defined by its anatomic conformation ; it applies also to its connection with the brain, where it is represented. Physiologists place the genito-spinal reflex centre in the lumbar region of the cord. From this centre to the brain nothing with regard to the activity and the seat of the function is known ; for the hypothesis of Gall, who made the cerebellum the seat of physical love, notwithstanding a few favorable observations of Budge and of Lussana, has not been widely accepted. Whatever may be our ignorance upon this point, it is evident that the sexual impressions must reach the brain, since they are felt, and because there are centres from whence the psychic incitations are transmitted to the sexual organs, in order to arouse them into action. These nerve-elements, whatever be their nature, number, or seat, whether they are localized or diffused, must be the cerebral, and consequently the psychic, representatives of the sexual organs ; and as in creating a particular state of consciousness, others are usually excited, there must needs exist an association between this group of psycho-physiological states and a certain number of other groups. From the above-mentioned cases, we must, accordingly, infer that there is produced a cerebral disturbance of unknown nature, (a woman believing herself a man, a man believing himself a woman,) the result of which is a fixed and erroneous state of consciousness. This fixed, exclusively predominant state thereupon produces a number of almost automatic natural associations, which are, as it were, its radiations (feelings, carriage, language, dress of the imaginary sex): it tends to complete itself. It is a metamorphosis which proceeds from above, and not from below. Here we have an

instance of what is called the influence of the moral over the physical nature ; and we shall try to show later on that the ego discussed by the majority of psychologists, (it is not here the question of the real ego,) is formed according to an analogous process. These cases, however, belong to the *intellectual* deviations of personality, of which we shall speak in the next chapter.

Before taking leave of this subject, I should not like to leave unnoticed a few matters of fact which are difficult to explain, yet which cannot be seriously advanced against us. I allude to the singular phenomenon called "opposite sexuality" (*sexualité contraire*), which has been quite frequently discussed of late, and *which it will suffice to mention in a few words. Certain patients observed by Westphal, Krafft Ebing, Charcot and Magnan, Servaës, Gock,* etc., display a *congenital* inversion of the sexual instinct, whence there results, notwithstanding a normal physical constitution, an instinctive and violent attraction for a person of the same sex, with a marked aversion for the opposite sex ; briefly, "a woman is physically a woman, and psychically a man, a man is physically a man and psychically a woman." Such facts are in complete disaccord with all that logic and experience teach us. The physical and moral contradict each other. Strictly speaking, those who maintain the entity of the ego, might avail themselves of these anomalies, and assert that they prove its independence, its autonomous existence. This, however, would be a great mistake, for their entire reasoning would rest upon two very weak foundations, upon facts which are very un-

* Charcot and Magnan, *Archives de Neurologie*, 1882, Nos. 7 and 12; Westphal, *Archiv für Psychiatrie*, 1870 and 1876. Krafft-Ebing, *Ibid.* 1877, etc.

common, and the present difficulty of explaining them. Nobody will deny that the cases of opposite sexuality represent an infinitely small fraction of the sum of the cases furnished by experience. By their very rarity they are exceptions; by their nature a psychological monstrosity; still, monstrosities are not miracles, and it is necessary to know whence they originate.

One might attempt several explanations, which usually means that none of them is really sufficient. I shall refrain from inflicting any upon the reader. Psychology, like every other science must submit to a provisory ignorance concerning a number of points, and need not be afraid to admit it. In this respect it widely differs from metaphysics, which pretends to explain everything. Scientists who have studied these strange beings from the exclusive point of view of medical science, regard them as degenerate beings. To us the curious point at issue is to know why this degeneracy should have assumed this particular form and not some other. It is probable that the clearing up of this mystery must be sought for in the multiple elements of heredity, in the complicated play of conflicting male and female influences; but I shall leave this task to more clear-sighted and fortunate individuals. Setting aside the question of causes, it is altogether impossible to refuse to admit an aberration of the cerebral mechanism, as in the cases of Leuret and analogous cases. However, the influence of the sexual organs upon the nature and formation of character is so little contested that to dilate longer upon the subject would be time wasted, and any hypothetical explanation of opposite sexuality would not in the least advance our present researches.

III.

The instincts, desires, tendencies, and feelings relating to the preservation of the individual and to that of the species have their well-determined material conditions—the former in the totality of organic life and the latter in a particular part of it. But when from the primitive and fundamental forms of emotional life we pass to those that are of secondary formation, born later in the course of evolution (social, moral, intellectual, æsthetic tendencies), beside the impossibility of assigning to these their immediate organic basis,—a circumstance that would cause us to grope our way in darkness,—we observe that they have not the same degree of generality. With the exception, perhaps, of the moral and social tendencies, none of them expresses the individual in its totality; they are partial and only represent a group in the totality of its tendencies. Hence no one of them by itself alone has the power of producing a metamorphosis of the personality. So long as the habitude called the bodily sense, and that other habitude which is memory, are not brought into play, a complete transformation does not take place: the individual may become changed; it cannot become another.

Still these variations, even when partial, have an interest of their own. They show the transition from the normal to the morbid state. In studying the diseases of the will we found in ordinary life many predictions of the most serious forms. Here likewise common observation shows us that the normal ego is but slightly endowed with cohesion and unity. Irrespective of characters that are perfectly concordant, (which in a rigorous sense of the word do not exist,)

there are in every one of us all sorts of tendencies, all possible antitheses, and among these contradictions, all kinds of intermediate shades, and among those tendencies every possible combination. This is because the ego is not only a memory, a store-house of recollections connected with the present, but an aggregate of instincts, tendencies, desires, which are merely its innate and acquired constitution coming into play. To use expressions much in vogue, we might say that memory is the static, and the group of tendencies the dynamic ego. If, instead of being guided unconsciously by this conception of an ego-entity,—a prejudice that has been strengthened in us by education and the supposed evidence of consciousness,—we simply agreed to take it for such as it is, to wit, as a co-ordination of tendencies and psychic states, the relative cause of which ought to be sought in the co-ordination and the consensus of the organism, we should no more wonder at these oscillations,—incessant in flighty characters but rare in steady dispositions,—which, during a long, short, or almost imperceptible space of time, show us the person in a new light. An organic state, an external influence strengthens a tendency; the latter becomes a centre of attraction toward which converge the states and tendencies that are directly associated with it; thereupon the associations draw nearer and nearer: the centre of gravity of the ego is displaced, and the personality has become another. “Two souls,” said Goethe, “dwell within my breast.” Only two! If moralists, poets, novelists, dramatists have shown us to satiety these two egos in a state of conflict within the same ego, common experience is still richer; it shows us several, each one excluding the other, as

soon as it advances to the front. This may be less dramatic, but it is more true. "Our ego at diverse epochs is very different from itself: according to age, the various duties and events of life, the excitations of the moment, a certain complexus of ideas, which at a given moment represents the ego, develops itself over and above all others, and advances to the front. We become another and yet are the same. My ego as a physician, as a scholar, my sensual ego, my moral ego, etc., that is, the complexus of ideas, of inclinations, and of directions of the will that are designated by these terms, may at any given moment enter into opposition and repel each other. This circumstance would have for a result, not only the inconsistency and separation of the thought and of the will, but also the complete absence of energy for each of these isolated phases of the ego, if, in all these spheres there was not a more or less clear return for the consciousness of some of these fundamental directions."* The orator, master of his eloquence who while speaking judges himself, the actor beholding himself play, the psychologist studying himself, are also instances of this normal separation in the ego.

Between these momentary and partial transformations, the trivial nature of which diminishes their importance as psychological proofs, and the serious states, of which we shall speak, there are other intermediate variations more constant, more penetrating, or both. The dipsomaniac, for example, has two alternate lives; in the one he is sober, methodical, industrious; in the other he is entirely swayed by his

* Griesinger, *Traité des maladies mentales* trans. Doumic, p. 55. See also an excellent study by M. Paulhan on "The variations of personality in the normal state," June 1882, in the *Revue philosophique*.

drunkard

passion, improvident, disorderly, dissipated. Have we not here as it were two incomplete and contrary individuals welded together in one common trunk? The same happens in the case of all persons who are subject to irresistible impulses, who insist that a mysterious power impels them to act in spite of themselves. Let us moreover recall to mind those transformations of character that are accompanied by cutaneous anæsthesia, and which have been observed by several alienists. One of the most curious of such cases was observed by Renaudin. A certain young man whose conduct had always been exemplary suddenly abandons himself to tendencies of the worst kind. In his mental condition it was impossible to verify any symptom of manifest alienation, but one could see that the entire surface of his skin had become absolutely insensible. The cutaneous anæsthesia was intermittent. "As soon as it ceases, the inclinations of the young man are entirely different; he is docile, affectionate, and understands thoroughly the painful character of his condition. When it manifests itself, the resistless power of the worst inclinations is its immediate consequence, and we have proof that it could proceed as far as murder." Maudsley reports certain analogous cases of insanity in children, that suggested to him the following reflections: "The special defective sensibility of skin in these cases is full of instruction in relation to the profound and general defect or perversion of the sensibility or receptive capacity of the whole nervous system which is shown in their perverted likings and dislikes, in their inability to join with other children in play or work, and in the impossibility to modify their characters by discipline; they cannot feel impressions as they naturally should feel

them nor adjust themselves to their surroundings, with which they are in discord; and the motor outcomes of the perverted affections of self are accordingly of a meaningless and destructive character. The insensibility of skin is the outward and visible sign of a corresponding inward and invisible defect, as it notably is also in idiocy."*

We inevitably revert to the organism, but this review we have made of facts of every kind which may seem monotonous, shows us the variations of personality in all its aspects. As there are no two identical cases, each case presents a peculiar decomposition of the ego. The cases last quoted show us a transformation of character without injury to memory. In proportion as we advance in our review of matters of fact, one conclusion, as it were, becomes more and more apparent to our minds; it is that *personality results from two fundamental factors, the constitution of the body with the tendencies and sentiments that manifest it, and the memory.* !!!

If (as said above) only the first factor is modified, there results a momentary dissociation, followed by a partial change of the ego. If the modification is so serious, that the organic bases of memory undergo a kind of paralysis, from which they cannot revive, then the disintegration of the personality is complete: there is no longer a memory of the past, and the present has taken a new form. Then a new ego is formed, usually quite unconscious of the former ego. Of these we have several examples, so well known, that I shall merely mention them: the American lady reported by Macnish, the case of Dr. Azam (Félida), and the case

* Maudsley, p. 287.

of Dr. Dufay.* By their very generality these cases do not come under any special division, and we have no reason to mention them here rather than elsewhere, except to remark, that the transition from one personality to another is always accompanied by a change of character, undoubtedly connected with the unknown organic change which rules the whole situation. This change is very distinctly and repeatedly pointed out by Dr. Azam: his patient during a certain period is gloomy, cold, reserved, but at other times gay, buoyant even to the verge of turbulence. This change is even still greater in the following case, and which I shall report more fully, because it is recent and but little known.†

The subject is a young man of seventeen years V . . . L . . ., affected with hysterical epilepsy, who entirely lost the memory of one year of his existence, and during this period was completely changed in character.

Born of an unmarried mother, who was "addicted to an open life of debauchery, and of an unknown father, he began to roam and beg on the streets as soon as he could walk. Later he became a thief, was arrested, and sent to the reformatory of Saint-Urbain where he did some field-work." One day being occupied in a vineyard he happened to lay his hands upon a serpent, hidden in a fagot of twigs. The boy was terribly frightened, and in the evening, on returning to the reformatory, became unconscious. These crises

* For complete observations, see Taine, *De l'Intelligence*, t. 1, p. 165; Azam, *Revue scientifique*, 1876, 20th May, and 18th September; 1877, 10th November; 1879 8th March; and Dufay *ibid.*, 15th July, 1876. As regards the part played by memory in these pathological cases we refer the reader to our work *Maladies de la mémoire*, p. 76 and following.

† This observation of Dr. Camuset is found *in extenso* in *Annales médico-psychologiques*, January, 1882.

from time to time were repeated, his legs grew weak, finally a paralysis of the lower limbs set in, his intellect remaining unimpaired. He was thereupon transferred to the asylum of Bonneval. There it was reported "that the patient has an open and sympathetic expression, that his character is amiable, and that he shows himself grateful for the care that is bestowed upon him. He tells the history of his life with all its minute details, even his thefts which he deplores, of which he is ashamed, and which he attributes to his forsaken condition and his comrades who led him into evil ways. He regrets very much what has happened, and declares that in the future he will be more honest." It was then decided to teach him a trade compatible with his infirmity. "He can read, and is learning to write. He is taken every morning to the tailors-shop, where he is placed upon a table and assumes naturally the classical position by virtue of the condition of his lower limbs which are atrophied and contracted. In two months time he learned to sew pretty well. He works with enthusiasm, and everybody is satisfied with his progress."

At this stage he is seized by an attack of hysterical epilepsy, which ends after fifty hours with a tranquil sleep. It is then that his old personality reappears.

"On awakening, V . . . wants to get up. He asks for his clothes, and is able to dress himself, but performs the operation in a very bungling manner; he then takes a few steps through the hall; his paraplegia having disappeared. His legs totter and with difficulty support the body because of the atrophy of the muscles. . . . When once dressed, he asks to go with his comrades into the vineyards to work. . . .

We quickly perceive that our subject still believes himself at Saint-Urbain, and wishes to assume his habitual occupations. In fact, he has no recollection of his crisis, and recognises nobody, not even the physicians and attendants any more than his companions in the ward. He does not admit having been paralysed and accuses those about him of teasing him. This appeared like temporary insanity, which was only to be expected after so severe an attack of hysteria, but time passes and still his memory does not return. V . . . very distinctly remembers that he had been sent to Saint-Urbain; he knows that 'the other day' he was frightened by a serpent; but from this moment all is oblivion. He remembers nothing more and does not even realize the lapse of time.

"It was thought that he might be simulating, as hysterical patients often do, and we employed all means to make V . . . contradict himself, but without ever succeeding in doing so. Thus, without letting him know where he was going, we have him taken to the tailors' workshop. We walk by his side, and take care not to influence him as to the direction to be taken. V . . . does not know whither he is going. On arriving in the shop he has every appearance of a person who does not know where he is and he declares that he has not been there before. He is given a needle, and asked to sew. He sets about the task as awkwardly as any man who performs for the first time a job of this kind. They show him some clothes the seams of which had been sewn by him, during the time he was paralysed. He laughs and seems to doubt, but finally yields to our observations. After a month of experiment and trials of all kinds, we remain convinced that V . . . really remembers nothing."

One of the most interesting points in regard to this case is the modification that the character of the patient underwent, namely, a return to his early life and to his hereditary antecedents: "He is no longer the same subject; he has become quarrelsome and a glutton; he answers impolitely. Formerly he did not like wine and most frequently gave his share to his companions; but now he will steal theirs. When they tell him that he once committed thefts, and caution him not to begin again, he becomes arrogant and will say: 'if he did steal, he paid for it, as they put him into jail.' They employ him in the garden. One day he escapes taking with him sixty francs belonging to an attendant of the infirmary. He is recaptured five miles from Bonneval, at the moment when, after selling his clothes in order to purchase others, he is on the point of boarding the railway train for Paris. He resists arrest, and strikes and bites at the wardens sent in search of him. Returned to the asylum, he becomes furious, cries, rolls on the ground; finally it is necessary to confine him in a solitary cell."

IV.

Although we have not as yet studied the anomalies of personality in all their forms, it will not be out of place to essay here a few conclusions, although partial and provisory, which may contribute to diminish the obscurity of the subject. In so doing, I shall, however, confine myself to a single feature,—to cases of fictitious personality, reducible to a fixed idea; to a predominant idea toward which an entire group of concordant ideas usually converge, all others being eliminated, and as if annihilated. Such are those who imagine themselves to be God, pope or emperor, and

speak and act accordingly. The study of the intellectual conditions of personality has in store for us a number of instances of this kind (as hypnotised subjects upon whom is imposed a personage or rôle): the cases of this kind that we already know are sufficient for us to enquire what they teach.

At first sight, these cases are quite simple as regards the mechanism of their formation. The first origin is obscure: Why is a particular idea produced and not some other? Usually we know nothing whatever about it; but the morbid conception once born, grows and increases, until its climax is reached, through the mere automatism of the association of ideas. I need not dwell upon this point, longer than to show that these pathological cases explain for us an illusion, into which psychology has almost always fallen when it has based itself simply upon internal observation, and which can be thus stated: the substitution for the real ego of a factitious ego that is much more simple.

In order to lay hold of the real concrete personality, and not a mere abstraction that takes its place, it is not necessary to withdraw within our consciousness, with closed eyes, and obstinately to question it; on the contrary, we need to keep our eyes wide open, and observe. The child, the peasant, the workingman, the millions of people that walk in the streets and in the fields, who never in their lives have heard anything about Fichte, about Maine de Biran, who never have read dissertations upon the ego and the non-ego, or even a line of psychology—one and all of them have their definite personality and each instant affirm it instinctively. Ever since that long-forgotten epoch when their ego was constituted, that is, since their ego was formed as a coherent

group in the midst of the processes assailing it,—this group maintains itself constantly while continually modifying itself. This coherent group is composed for the greater part of states and acts, almost automatic, that constitute in each the feeling of his body and the routine of life, and that serve as a support for all the rest, yet any alteration of which, even a short and partial one, is immediately felt. In a great measure also it is composed of an aggregate of sensations, images, and ideas representing the usual surroundings amidst which we live and move, together with the recollections that are connected with them. All this represents organised states solidly connected among themselves, reciprocally supporting each other, and forming a bodily whole. We verify now the fact, without seeking the cause of it. All that is new or unusual, any change in the state of the body or of its surroundings, is adopted without hesitation and classed by an instinctive act, either as making a part of the personality or as being strange to it. This operation is performed every moment, not through any clear and explicit judgment, but through an unconscious and far deeper logic. If we have to characterize by a definite word this natural, spontaneous and real form of personality, I should call it a *habit*, for it cannot be anything else, being, as we maintain, only the expression of an organism. If the reader instead of observing himself will rather proceed objectively, that is, observe and interpret by the aid of the data of his own consciousness the condition of those who have never reflected on their personality, (and this is the vast majority of the human species,) he will find that the preceding thesis is correct, and that real personality affirms itself not by reflection but by acts.

Let us now examine what is called factitious or artificial personality. When the psychologist through internal observation tries, as it were, to comprehend himself, he attempts an impossibility. At the moment he assumes the task in question, either he will adhere to the present, and then hardly advances at all; or in extending his reflection toward the past, he affirms himself to be the same as he was one year or ten years ago; in either case he only expresses in a more learned and laborious manner what any peasant knows as well as he does. Through inward observation he can only apprehend passing phenomena; and I am not aware that any reply has been given to the following just remarks of Hume: "For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception* or other of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time without a perception, and never can observe anything but the perception. If anyone, upon serious and unprejudiced reflection, thinks he has a different notion of himself, I must confess I can reason no longer with him. All I can allow him is, that he may be in the right as well as I, and that we are essentially different in this particular. He may, perhaps, perceive something simple and continued, which he calls himself, though I am certain there is no such principle in me."† Since Hume, it has been said: "Through effort and resistance we feel ourselves cause." This is very well; and all schools more or less agree, that through this the ego is distin-

* In Hume's language, "perception" corresponds almost to what we now call state of consciousness.

† Philosophical Works. Vol. I., p. 312.

guished from the non-ego; but this feeling of effort none the less remains a simple state of consciousness like others, the feeling of muscular energy displayed in order to produce any given act.

To seek through analysis to comprehend a synthetic whole like the personality, or through an intuition of consciousness that scarcely lasts a few seconds, to encompass such a complex thing as the ego, is to attempt a problem, the data of which are contradictory. So, as a fact, psychologists have taken another ground. They have considered the states of consciousness as accessories, and the bond which unites them as the essential element, and it is this mysterious *underlying something* that under the names of unity, identity, and continuity, has become the true ego. It is clear, however, that we have nothing here but an abstraction, or more precisely, a scheme. For the real personality there is substituted *the idea of personality*, which is altogether another thing. This idea of personality is, like all general terms, formed in the same manner as sensibility, will, etc.; but it does not resemble the real personality more than the plan of a city resembles the city itself. And as in cases of aberration of personality, which have led us to the present remarks, one single idea has been substituted for a plexus, constituting an imaginary and a diminished personality; in the same manner a fixed scheme of personality has been substituted by psychologists for concrete personality, and upon this framework, almost devoid of contents, they reason, induce, deduce, and dogmatize. It is clear, however, that this comparison is only done by way of *mutatis mutandis* and with many restrictions, which the reader himself will discover. There are still many other observations that

could be made, but I am not engaged here on a strictly critical work.

In short, to reflect upon our ego, is to assume an artificial position, which changes the nature of the ego; it is merely to substitute an abstract representation for a reality. The true *ego* is the one that feels, thinks, acts, without making of itself an object of vision, for it is a subject by nature and by definition, and in order to become an object, it has to undergo a reduction, a kind of adaptation to the optics of the mind which transform and mutilate it.

Up to this point we have treated the question from its negative side. To what positive hypothesis as to the nature of the personality are we led by a consideration of morbid cases? Let us first eliminate the hypothesis of a transcendental entity, incompatible with pathology, and which, besides, explains nothing.

Let us set aside, moreover, the hypothesis which makes of the ego "a bundle of sensations," or of states of consciousness, as is frequently repeated after Hume. This is to be influenced by appearances, to take a group of signs for a real thing, or more precisely, to take effects for their cause. And again, if, as we maintain, consciousness is only an indicative phenomenon, it cannot be a constitutive state.

We must advance still further, to that consensus of the organism, namely, of which the conscious ego is only the psychological expression. Has this hypothesis more solidity than the other two? Objectively, as well as subjectively, the characteristic trait of personality is that continuity in time, that permanence which we call identity. This has been denied to the organism, upon the strength of arguments too well known to need repeating here; but it is strange that it should

not have been perceived, that all arguments pleaded in favor of a transcendental principle are really applicable to the organism, and that all reasons that can be advanced against the organism are applicable to a transcendental principle. The remark that every superior organism is one in its complexity is as old, at least, as the Hippocratic writings, and since Bichat no one attributes this unity to a mysterious vital principle; yet certain people make a great stir about this whirlwind or continuous molecular renovation which constitutes life, and ask, "Where is the identity?" As a matter of fact, however, everybody believes in this identity of the organism and affirms it. But, identity is not immobility. If, as some scientists think, life resides less in the chemical substance of the protoplasm than in the movements with which the particles of this substance are animated, identity would be a "combination of movements" or a "form of movement," and this continuous molecular renovation itself would be subordinated to conditions more profound. Without dilating upon the subject, it must be evident to any unprejudiced mind that the organism has its identity. And from this point, what simpler or more natural hypothesis than that of perceiving in conscious identity the internal manifestation of the external identity which is in the organism? "If any one chooses to assure me that not a single particle of my body is what it was thirty years ago, and that its form has entirely changed since then; that it is absurd, therefore, to speak of its identity; and that it is absolutely necessary to suppose it to be inhabited by an immaterial entity which holds fast the personal identity amidst the shifting changes and chances of structure:—I answer him that other people who have

Geo

known me from my youth upwards, but have not my self-conscious certainty of identity, are, nevertheless, as much convinced of it as I am, and would be equally sure of it even if, deeming me the greatest liar in the world, they did not believe a word of my subjective testimony; that they are equally convinced of the personal identity of their dogs and horses whose self-conscious testimony goes for nothing in the matter; and lastly, that admitting an immaterial substance in me, it must be admitted to have gone through so many changes, that I am not sure the least immaterial particle of it is what it was thirty years ago; that with the best intention in the world, therefore, I see not the least need of, nor get the least benefit from, the assumed and seemingly superfluous entity."*

It is, however, upon this physical basis of the organism, that rests, according to our thesis, what is called the unity of the ego, that is to say, the solidarity which connects the states of consciousness. The unity of the ego is that of a complexus, and it is only through a metaphysical illusion that the ideal and fictitious unity of the mathematical point has been attributed to it. It does not consist in the act of a supposed simple "essence," but in a co-ordination of the nerve-centres, which, themselves, represent a co-ordination of the functions of the organism. Undoubtedly we are here within the sphere of hypothesis, but at least, it is not of a supernatural character.

Let us take man in the foetal state, before the birth of any psychic life, leaving aside any hereditary inclinations, already impressed upon him in any manner whatever, and which, at a subsequent time, will manifest themselves. At some period of the foetal state, at

* Maudsley, *Body and Will.* p. 77.

least during the last few weeks of it, some kind of sense of the body must have been produced, consisting in a vague feeling of well-being or discomfort. No matter how confused we may suppose it to be, it implies certain modifications in the nerve-centres, as far as compatible with their rudimentary state. When to these simple, vital organic sensations there are added sensations from an external cause (objective or not) they also necessarily produce a modification in the nerve-centres. But they will not be inscribed upon a *tabula rasa*; the web of the psychic life has already been woven, and this web is the general sensibility, the vital feeling, which, vague as it may be at this period, definitively constitutes almost the whole sum of consciousness. The bond of the states of consciousness among themselves now reveals its origin. The first sensation (if there be one in an isolated state) does not come unexpectedly, like an aerolite in a desert; at its first entrance it is connected with others, with those states that constitute the sense of body, and which are simply the psychic expression of the organism. Translated into physiological terms, this means that the modifications of the nervous system that represent materially the sensations and desires which follow the first elements of the higher psychic life, attach themselves to the previous modifications that are the material representatives of the vital and organic sensations; and by this means there are established relations between these nervous elements; so that from the very outset the complex unity of the ego has its conditions of existence in this general consciousness of the organism, which, though so frequently overlooked, serves as the support of all the rest. Thus, finally, upon the unity of the organism every-

thing depends, and when passing also from the embryonic state, the psychic life is formed, the mind may be compared to some gorgeous piece of tapestry, in which the warp has completely disappeared, at one place beneath a faint design, at another beneath a thick embroidery in high relief; the psychologist who restricts himself to internal observation, perceives only the patterns and embroidery and is lost in conjectures and guesses as to what lies hidden beneath; if he would but consent to change his position and to look at it from behind, he would save himself many useless inductions, and would know more about it.

* * *

We might discuss the same thesis under the form of a criticism of Hume. The ego is not, as he maintained, a mere bundle of perceptions. Without interposing the teaching of physiology but confining ourselves to ideological analysis, we observe a serious omission—that of the *relations* between the primitive states. A relation is an element of a vague nature, difficult to determine, because it does not exist by itself. It is nevertheless, something more than and different from the two states by which it is limited. In Herbert Spencer's *Principles of Psychology* there is an ingenious study (which has been too little noticed) of these elements of psychic life, with certain hypotheses regarding their material conditions. Prof. W. James has quite recently treated of this question.* He compares the irregular course of our consciousness to the transit of a bird that alternately flies and perches. The resting-places are occupied by relatively stable sensations and images; the places passed in flight are

* Herbert Spencer, *Principles of Psychology*, Vol. 1, § 65. Prof. James in *Mind*, Jan. 1884, p. 1, and following. See also Huxley's *Hume*.

represented by thoughts of relations between the points of rest: the latter—the “transitive portions”—are almost always forgotten. It seems to us that this is another form of our thesis, that of the continuity of the psychic phenomena, by virtue of a deep, hidden substratum, which must be sought in the organism. In truth, it would be a very precarious personality that had no other basis than consciousness, and this hypothesis is defective in the face of even the simplest facts; as, for example, to explain how after six or eight hours of profound sleep, I have no hesitation in recognizing my own identity. To place the essence of our personality in a mode of existence (consciousness) which vanishes during almost one third of our life is a singular solution.

We, accordingly, maintain here, as we have elsewhere in regard to memory, that we must not confound individuality in itself, as it actually exists in the nature of things, with individuality as it exists for itself, by virtue of consciousness (personality). The organic memory is the basis of all the highest forms of memory, which are only the products of its perfection. The organic individuality is the basis of all the highest forms of personality, which are only the products of its perfection. I shall repeat of personality as of memory, that consciousness completes and perfects it, but does not constitute it.

Although,—in order not to prolong these already protracted considerations,—I have strictly refrained from all digression, from criticism of adverse doctrines, and from the exposition of points of detail, I must, incidentally, point out a problem which naturally presents itself. There has been a great deal of discussion as to whether the consciousness of our personal

identity rests on memory or *vice versa*. One says : It is evident that without memory I should only be a present existence incessantly renovated, which does away with all, even the faintest possibility of identity. The other says : It is evident that without a feeling of identity that connects them reciprocally, and stamps upon them my own mark, my recollections are no longer my own ; they are extraneous events. So then, is it the memory that produces the feeling of identity, or the feeling of identity that constitutes the memory ? I answer : neither the one nor the other ; both are *effects*, the cause of which must be sought in the organism ; for, on the one hand, its objective identity reveals itself by that subjective condition which we call the feeling of personal identity ; and, on the other hand, in it are registered the organic conditions of our recollections, and in it is to be found the basis of our conscious memory. The feeling of personal identity and the memory in the psychological sense, are, accordingly, effects of which neither one can be the cause of the other. Their common origin is in the organism, in which identity and organic registration (i. e., memory) are one. Here we encounter one of those incorrectly formulated problems, that frequently occur in connection with the hypothesis of a "consciousness-entity."

CHAPTER III.

DISORDERS OF THE INTELLECT.

I.

IN certain morbid states, the five universally admitted classical senses are subject to very serious derangements. Their functions are perverted or distorted. Do these *paræstheses* and *dysæstheses* play a part in the alterations of personality? Before examining this point there arises a preliminary question: What happens in the case of the suppression of one or of several senses? Is the personality altered, thwarted, transformed? The answer, resting upon experience, seems to be a negative one.

The total loss of a sense may be acquired or be congenital. Let us first examine the former case. We shall not here consider the two secondary senses of taste and smell, nor the sense of touch in all its different forms, coming, as it does, so near to general sensibility. We will limit ourselves to sight and hearing. Acquired blindness and deafness are not rare; and are often accompanied by certain modifications of character, but these changes are not radical, and the individual remains the same. Congenital blindness and deaf-muteness affect personality more deeply. Individuals who are deaf and dumb from birth, limited thus to their own resources and deprived of artificial language, remain in a state of notorious intellectual inferiority. This however has been at times

exaggerated,* but nevertheless it is incontestable, and is due to causes that have been too frequently discussed to need repetition. Conscious personality in the above instance falls below the normal medium; but in such a case there is rather an arrest of development than an alteration of personality in a strict sense of the term.

As regards those who are born blind it is well known that many attain a high standard of intellectuality, and therefore we have no authority to attribute to them any diminution or alteration of personality whatever. Notwithstanding that their conception of the visible world, formed only from descriptions of it, may seem odd and whimsical to us, it does not seriously influence either the nature of their person or the idea they entertain of it.

Let us take the case of Laura Bridgman, a most remarkable instance of sensorial privation, and one that has been very minutely observed, and fully recorded.† Here we find a woman, deprived of sight and hearing at the age of two years, and almost entirely of the senses of smell and taste, and possessing only the sense of touch. We must, no doubt, make a liberal allowance for the patient and the intelligent education to which she owed her development. At the same time the fact remains, that her teachers could not endow her with new senses, and the sense of touch alone had to suffice under all circumstances. In spite of all these disadvantages this woman presents

* Compare upon this point the facts reported by Kussmaul, *Die Störungen der Sprache*, Chap. VII, p. 16, and following.

† As to Laura Bridgman, see *Revue Philosophique*, Vol. I, p. 401; Vol. VII, p. 316. The principal data relating to her have been compiled by her teacher Mary Swift Lamson, in her work: *The Life and Education of Laura Dewey Bridgman, the deaf, dumb, and blind girl*. London: 1878. Trübner.

herself to us in her own individuality, possessed of a well-marked character; an amiable disposition, an almost inalterable good temper, as patient as she was eager in her efforts for self-improvement; in short she confronts us as an ordinary person.

Omitting the innumerable details involved in the preceding cases, we may safely infer, that the natural or acquired privation of one or of several senses is not necessarily accompanied by a morbid state of personality. In the least favorable cases there is a relative arrest of development, which is remedied by education.

It is clear to those who maintain that the ego is an exceedingly complex compound (and this is our own thesis), that every change, addition, or subtraction in its constituent elements will affect the ego more or less. But the purpose of our analysis is, just to distinguish among such elements those that are essential from those that are accessory. The part contributed by the external senses (touch excepted) is not an essential factor. (The senses determine and circumscribe personality, but do not constitute it.) If in questions of observation and experience it were not too rash to rely upon pure logic, this conclusion might have been drawn *a priori*. Sight and hearing are pre-eminently objective; they reveal to us that which is without, not that which is within. As regards touch—a complex sense, which many physiologists resolve into three or four senses—in so far as it acquaints us with the properties of the external world, and is an eye to the blind, it belongs to the group of vision and hearing; otherwise it is only one form of the feeling that we have of our own body.

It may seem strange that *paræsthesis* and *dysæsthesis*,

the simple sensorial derangements which will now occupy our attention, should disorganize the ego. Still, observation proves and reflection explains the fact. This work of destruction does not really proceed from the sensorial derangements alone; they are but external symptoms of a much deeper internal disorder, which affects the bodily sense. The sensorial alterations are rather auxiliary than efficient causes. This is confirmed by the facts.

Alterations of the personality with sensorial disturbances, but without significant hallucinations, or loss of judgment, are met with in a certain number of morbid states. We shall select as a type the neurosis, studied by Krishaber under the name of "cerebro-cardiac neuropathy." It matters little to us whether or not this group of symptoms should or should not be regarded as a distinct pathological unity; this is a question for physicians.* The purpose of our investigation is an entirely different one.

Let us resume the study of the physiological disorders, the immediate effect of which is to produce a change in the cœnesthesis (the sense of body). At first there occur derangements of the circulation, consisting chiefly in an excessive irritability of the vascular system, probably due to an excitation of the central nervous system, whence are produced contractions of the smaller vessels, *ischæmia* in certain regions, insufficient nutrition and exhaustion. Then there are disorders of locomotion, dizziness, continuous feeling of vertigo and of inebriation, with stumbling, relaxation of the limbs, or hesitating gait, and an involun-

* *De la névropathie cérébro-cardiaque*, by Dr. Krishaber. Paris: 1873. Masson. In general this disease is regarded not as a distinct species, but as a particular case of spinal irritation or of neurasthenia. See Axenfeld and Huchard: *Traité des névroses*, 1873, pp. 277 and 294.

tary forward impulsion "as if moved by a sort of spring."

In passing from the internal to the external, we find the sense of touch, which forms the transition from general sensibility to the special senses. Some persons have the feeling as if they had no longer any weight, or were very light. Many persons lose the exact notion of resistance, and are unable, through the sense of touch alone, to recognize the form of objects. They imagine themselves as "separated from the world;" their body enveloped, as it were, by isolating surroundings, that interpose themselves between the individual and the external world.

"There appeared," said one of them, "a dark atmosphere all around my person; still, I saw very well that it was broad daylight. The word "dark" does not exactly express my thought; I ought to use the German word *dumpf*, which also means heavy, dense, dull, extinguished. This sensation was not only visual but also cutaneous. I was wrapt in a murky atmosphere; I beheld it, felt it; it was like a heavy layer of some bad conducting medium that isolated me from the external world. I am entirely unable to tell you how impressive this sensation was; but, it seemed to me, that I was transported far, very far from this world, and mechanically I cried out, in a loud voice, 'I am far, far away.' At the same time I knew perfectly well that I was not far away; I distinctly remembered all that had happened to me; but between the moment that preceded, and that which followed my attack, there intervened an immense interval, a distance like that from the earth to the sun."

In a case of this kind, vision is always affected. Without speaking of slight disorders (such as photo-

phobia, amblyopia) some persons will perceive objects as double; to others they seem flattened, and a man appears to them as a reliefless silhouette. To many, the surrounding objects seem to grow diminished and to recede into infinite space.

Auditory derangements are of the same nature. The patient no longer recognizes the sound of his own voice; it seems to come from afar, or to lose itself in space, without being able to reach the ear of those with whom he converses, whose answers, likewise, are scarcely heard.

If now, in thought, we unite together all these different symptoms (accompanied by physical pain, and by derangements of taste and smell) suddenly, and in a single block, arises a group of internal and external sensations, marked by a new character, connected among themselves by their simultaneousness in time, and still more profoundly so through the morbid state which is their common source. Here we have all the elements of a new ego, and, as a matter of fact, sometimes it is actually formed. "I have lost all consciousness of my being; I am no more myself." Such is the formula which is repeated in almost all the observations of this kind. Others will even go still further, and at times, imagine themselves double. "One of the strangest ideas, which, despite myself, is forced upon my mind," said a certain engineer, "is to believe myself double. I seem to possess one ego, which thinks, and another which acts." (Obs. 6.)

This process of formation has been too well studied by M. Taine, to need to be repeated. "We could not more aptly compare the condition of the patient than likening it to that of a caterpillar, which, while preserving all the ideas and recollections of a caterpillar,

should suddenly become a butterfly, with the senses and sensations of a butterfly. Between the old state and the new state, between the first ego—that of a caterpillar—and the second ego—that of a butterfly—there is a deep gulf, a complete rupture. The new sensations do not find any anterior series to which they can connect themselves; the patient can no longer interpret or make use of them; he does not even recognize them, they are unknown to him. Hence, there follows two strange conclusions; the first, which consists in saying: “I am not;” the second, a trifle more advanced, which says, “I am another.”*

It is, indeed, difficult for any sane and well-balanced mind to figure to itself an extraordinary mental state of this kind. But although inadmissible to the sceptical observer, who looks at the matter from without, these conclusions are strictly correct to the patient who sees them from within. For, to him alone is the continual state of vertigo and intoxication like a permanent chaos, in which the state of equilibrium, of normal co-ordination, cannot be established, or, at least, cannot endure.

If now we compare with the other more or less serious forms, this change of personality *a sensibus læsis*, we shall find that a new ego is not formed in all cases. When it is formed it always disappears with the cessation of sensorial derangements. It is never able entirely to supplant the normal ego; there is alternation between both: the elements of the original ego preserve enough cohesion to allow it by turns to gain predominance. Hence the illusion of believing oneself double, which, strictly speaking, to the patient himself is not an illusion.

* *Revue philosophique*, Vol. I., page 289, and *L'Intelligence*, 4th Edition, Vol. II, Appendix.

As to the psychological mechanism, by virtue of which he believes himself double, I attribute it to the memory. I have previously attempted to show, that real personality—with its enormous mass of subconscious and conscious states is condensed in our mind into a single image or fundamental tendency, which we call the *idea* of our personality. This vague conception (*schéma*) which represents real personality, much as the general idea of man represents individual men, or as the plan of a city represents the city—suffices for the ordinary needs of our mental life. Two images or conceptions must exist with our patients, and succeed each other in their consciousness according as the physiological state causes the old or the new personality to prevail. But in the transition from one to the other, however sudden it may appear, there is still a certain continuity. These two states of consciousness have not an absolute beginning in the one case, and an absolute end in the other, and between them a vacancy, a hiatus. Like all states of consciousness they have a duration; they occupy a portion of time, and the terminal end of the one touches the initial end of the other. In other words they encroach one upon the other. When the one begins to exist the other still subsists in a diminishing state; there is a period of coexistence in which they reciprocally penetrate each other. In our opinion it is *during this period of transition or of passage*, whenever it is produced, that the patient believes himself double.

Let us remark finally, that sensorial derangements are only the result of a more deeply-seated disorder within the organism, and consequently here also the sense of the body plays the principal part in the pathology of personality.

We can now explain how the natural or acquired suppression of one or of several senses leaves the individuality intact at its base, while momentary perversions of less serious appearance will transform it.

Physiologically, in the former case, we have a sum total of nervous elements, condemned to functional inertia, either at the beginning or during the course of life: the personality becomes like a poor or weakened orchestra, which nevertheless suffices for all necessary purposes. In the second case, all the nervous elements serving the injured external senses, the muscular sensibility, the organic and visceral sensibility, have undergone an unusual modification,—somewhat like an orchestra in which nearly all the instruments have suddenly changed their tone.

II.

A natural transition from perceptions to ideas is made through hallucinations; and we shall now study the part played by the latter in the anomalies of personality. At the outset let us recall to mind a few general points regarding the hallucinatory state. Four hypotheses have been advanced to explain it*: 1. The peripheric or sensorial theory, which places the seat of hallucination in the organ of the senses. 2. The psychic theory which localizes it in the centre of ideation. 3. The mixed or psycho-sensorial theory. 4. The theory which attributes hallucination to the perceptive centres of the cortical layer.

Observation teaches us that hallucinations sometimes affect one sense only, and sometimes several senses; that most frequently they extend to both sides

* For the complete exposition of the question, see the important articles of M. Binet, *Revue philosophique*, April and May, 1884.

of the body, but occasionally to one side only (right or left, indifferently); still more rarely, they are bilateral, yet presenting a different character on each side; thus, whilst one ear is assailed by threats, injuries, evil councils; the other is comforted by kind and soothing words; one eye perceives only sad and repugnant objects, the other beholds gardens rich in flowers. These latter, being at the same time bilateral and opposite by nature, are to us the most interesting.

Happily, in this immense domain, we have only to explore a very small area. Let us carefully limit our subject. In the normal state the feeling and thinking individual is entirely adapted to his surroundings. Between the group of states and of internal relations which constitute the mind, and the group of states and of external relations, which constitute the external world, there is a correspondence, as Spencer has minutely shown. In the case of the hallucinator this correspondence has been destroyed. Hence, false judgments, absurd acts, that is, incongruous and unfitting acts. Still, all this constitutes a disease of reason and not of personality. Undoubtedly the ego is dethroned; but so long as the consensus which constitutes it has not disappeared, is not split in two, or has not alienated a part of itself, (as we shall see presently) so long will there not be any disease of personality in a proper sense; the derangements will be but secondary and superficial. Consequently, the immense majority of cases of hallucination are withdrawn from our consideration.

Nor have we, moreover, either to occupy ourselves with that numerous category of patients, who misjudge the personality of others, and who take the physicians

and attendants of the asylum for their own relatives, or their relatives for some imaginary persons in some connection with their delusions.*

Having made these eliminations, the cases to be studied become sufficiently circumscribed, since they are reduced to changes of personality the basis of which is hallucination. There is almost invariably an *alienation* (in the etymological sense) of certain states of consciousness, which the ego does not consider as its own, but makes objective and places outside of itself, and to which, ultimately, it attributes a distinct existence yet independent of its own.

As regards the sense of hearing, the history of religious mania furnishes numerous examples. I shall quote the most ordinary cases, namely, those in which at first the hallucinatory state acts alone. A woman was persecuted by an internal voice, "which she heard only within her ear," and which would rebel against whatever she wished. The voice always incited evil when the patient wished for good. Without being heard externally, the voice would call to her: "Take a knife and kill yourself." Another hysterical patient originally had thoughts, and would utter words she had no intention of saying, and soon would express them in a voice that differed from her own. This voice at first only made indifferent or rational remarks; afterwards it assumed a negative character. "At the present time, after thirteen years the voice simply verifies what the patient has just said, or comments upon her words, criticizes them, turns them into ridicule. The

* To some patients, the same individual is, by turns, transformed into an imaginary person and maintained in his real personality. A woman at times recognized her husband, and at times took him for an intruder. She had him arrested, and he had great difficulty in establishing his identity (*Magnan Clinique de Sainte-Anne*, Feb. 11, 1877.)

tone of this voice, when the mind speaks, always differs a little, and sometimes entirely from the ordinary voice of the patient, and this is the reason why the latter believes in the reality of this mind. I, myself, have frequently observed these same facts."*

As regards sight, alienations of this kind are less frequent. "A very intelligent man," says Wigan (p. 126) "had the power of putting his *double* before himself. He used to laugh loudly at this double, which would also laugh in return. For a long time this was a subject of amusement to the man; but the final result proved lamentable. By degrees he became convinced that he was being haunted by himself. This other ego taunted him, worried and mortified him incessantly. In order to put an end to this sad existence he arranged his private affairs, and, being loath to begin a new year, on Dec. 31, at midnight, he shot himself in the mouth."

Finally Dr. Ball in *L'Encéphale* (1882, II.) reports the case of an American, who, through simultaneous hallucinations of hearing and sight, possessed in all its features an imaginary double. "Prostrated by a sunstroke, he remained unconscious for a month. Shortly after recovering his senses, he heard a distinctly articulated human voice, which said: 'How are you?' The patient answered, and a short conversation was begun. On the following day the same question was repeated. The patient looked around but saw no one. 'Who are you?' said he. 'I am Mr. Gabbage,' answered the voice. A few days later the patient got a glimpse of his interlocutor, who from that time presented himself with the same features and in the same

* Griesinger, *Maladies Mentales*, French Trans., p. 285-286; Baillarger reports an analogous case, *Annales Médico-psych.*; 1st series, Vol. VI. p. 151.

dress; he would always appear in front, showing only his bust. He had the appearance of a vigorous and well built man of about thirty-six years, with a strong beard, dark-brown complexion, large black eyes, strongly penciled eye-brows, and was always dressed in hunting costume. The patient would fain have known the profession and habits of his questioner and where he lived; but the man would never consent to give any other information than simply his name." At last Mr. Gabbage grew more and more tyrannical: ordering the patient to throw his newspaper, watch and chain into the fire, to take care of a young woman and her child whom he had poisoned, and eventually to throw himself through the window of a third floor, whence he fell and was killed upon the pavement below.

These facts show us a beginning of *dissolution of personality*. Later on we shall cite other cases which have not hallucination for their basis, and which will enable us to better understand those already referred to. That more or less perfect co-ordination which in the normal state constitutes the ego, is here to a certain extent broken. Within the group of states of consciousness which we feel as our own, because produced or experienced by ourselves, there exists one, which, although having its source in the organism, still does not enter into the consensus, but remains apart and appears separate from it. In the order of thought this is the analogue of irresistible impulsions; in the order of action, a partial inco-ordination.*

These voices and visions emanate from the patient himself; why then does he not regard them as his own? This is a very obscure question, but I shall at-

* Concerning irresistible impulsions considered as a phenomenon of partial inco-ordination, see my *Maladies de la Volonté*, p. 71 and following.

tempt to answer it. There must exist here anatomical and physiological causes, unfortunately at present unknown, the discovery of which would solve the problem. Being ignorant of these causes, we are restricted to the consideration of the surface, the symptoms, and the states of consciousness with the signs that reveal them. Let us, accordingly, suppose a state of consciousness (with its organic conditions) having the characteristic of being local, that is of having in its physical and psychic organization the weakest possible radiation. In order to make myself understood by way of antithesis, let us suppose any violent, sudden emotion; it resounds through the whole system, shakes completely the physical and mental life; it is complete in its diffusion. Our case is exactly the reverse of this. Organically and psychically it has only rare and precarious connections with the rest of the individual; it remains apart, like a foreign body, lodged within the organism, but having no share in its life. It does not enter that great woof of cœnesthesia which sustains and unifies everything. It is a cerebral phenomenon almost without support, analogous to the ideas that are imposed by way of suggestion in hypnotism. This attempt at an explanation is corroborated by the fact that any morbid state—if it be not arrested by nature itself or by medical treatment—has a fatal tendency to increase and expand at the expense of the primitive personality, which, attacked by this parasite, diminishes. Still, in this case it preserves its original mark, and does not constitute a duplication but an alienation of personality.

I only offer this attempt at an explanation as an hypothesis, being perfectly convinced that our present lack of knowledge of the organic conditions of the phe-

nomenon precludes the possibility of a satisfactory diagnosis. In submitting this explanation I have been compelled to anticipate what will afterwards be said in reference to ideas, and which, perhaps, will furnish us with new arguments in favor of that hypothesis.

* * *

We have now to speak of recent experiments upon hallucinations which, taken with other facts, have led certain authors to give an explanation of the duplication of personality, so simple as to be, so to say palpable, that it looks quite obvious. In the first place they point out the functional independence of the two hemispheres of the brain, and hence they conclude that from their synergy results the equilibrium of the mind, and from their discord various derangements and ultimately the division of the psychic individual. We have here two distinct questions, which have been clearly discerned by several of the scientists whom I shall quote, and much confounded by others.

Sir Henry Holland, a physician and well-known psychologist, was the first who (in 1840) studied the brain as a double organ, suggesting that certain aberrations of the mind might be due to the irregular action of the two hemispheres, of which the one in certain cases seems to correct the perceptions and sentiments of the other. In 1844 Wigan went still further. He maintained that we had two brains and not merely one; and that "the *corpus callosum*, far from being a bond of union between them, is really a wall of separation," and maintained even more positively than his predecessor, the duality of the mind.* The advance-

* Wigan: *The duality of mind proved by the structure, functions, and diseases of the brains, and by the phenomena of mental derangement, and shewn*

ment of cerebral anatomy has subsequently yielded other and more positive results; such as inequality of weight of the two lobes of the brain, their constant asymmetry, differences in the topography of the cortex, etc. The discovery by Broca of the seat of aphasia, was a new argument of great value. It was also supposed that the left hemisphere was the principal seat of intelligence and of will, that the right hemisphere was more particularly devoted to the life of nutrition (Brown-Séguard). I abridge this historical résumé, which could be much lengthened, and come back at once to hallucinations. The existence of simultaneous hallucinations, sad on the one side, joyous on the other, in all cases different and even contradictory, attracted the attention of observers. But there was something better to do than observing; there were experiments to be made. Hypnotism furnished the means for the latter. Let us remember that the hypnotised subject can pass through three phases: the first lethargic, characterized by neuro-muscular excitability; the second, cataleptic, produced by raising the eyelids; and the third, somnambulistic, caused by pressure upon the vertex. If during the cataleptic state we lower the right eyelid, we act upon the left brain, and we determine a lethargic state of the right side only. The subject thus becomes, as it were, divided into two—hemilethargic to the right, hemicataleptic to the left, and I will now state what occurs taking the facts from M. P. Richer's well-known book:

“I place upon the table a water-jug, a basin, and some soap; as soon as the patient's glance has been attracted towards these objects, or her hands touch

to be essential to moral responsibility. London, 1884. This badly digested book does not bear out what the title claims.

any of them, she proceeds with apparent spontaneity to pour water into the basin, takes the soap and washes her hands with very minute care. If we then lower the lid of one of her eyes—the right eye for example—then all the right side becomes lethargic, and the right hand immediately stops; but the left hand, nevertheless, continues the movement. On again raising the eyelid, both hands at once resume their action as before.” The same thing is also produced on the left side. “If we put into the patient’s hands the box containing her crochet-work, she will open it, take out her work and begin to crochet with remarkable skill If we close one of her eyes, the corresponding hand will stop, the arm drops motionless . . . but the other hand, unaided, seeks to continue a work that has now become impossible; the mechanism continues to work on one side, but it modifies its movement, with the purpose of rendering it efficacious.”

The author reports several other cases of the same kind, of which I shall only quote the last, because it confirms Broca’s discovery. On placing in the hands of the subject an open book, and directing her glance toward one of its lines, she reads. “In the midst of her reading, the closure of the right eye, through the decussation of the optic nerves, which affects the left brain, stops the patient abruptly in the middle of a word or phrase. As soon as the eye is opened again she resumes her reading, finishing the word or phrase that had been interrupted. If on the contrary the left eye is closed, she continues her reading, only hesitating a little on account of partial amblyopia and achromatopsia of the right eye.”*

One might vary these experiments. A different at-

* P. Richer. *Etudes cliniques sur l’hystéro-épilepsie*, pp. 391—393.

itude is impressed upon the limbs of each side of the body ; on one side the subject bears a stern expression, while on the other side she smiles and sends kisses. The hallucinatory state can be provoked only on the left or on the right side. Finally, let two persons approach the subject, one at each ear ; the person on the right describes the fine weather, the right side smiles ; the other on the left describes the rain, the left side betrays displeasure and the labial commissure is lowered. Or again, while suggesting through the right ear the hallucination of a picnic, near the left ear let the barking of a dog be imitated ; the face will express pleasure at the right and alarm at the left side.*

These experiments, of which we only give a very condensed summary, together with many other facts, have very logically led to the following conclusion : that there exists a relative independence of the two cerebral hemispheres, which by no means excludes their normal co-ordination, but which in certain pathological cases becomes a perfect dualism.

Some authors have been inclined to go still further and to hold that this cerebral dualism suffices to explain every discrepancy existing within the mind, from simple hesitation between two resolves to be made, to the complete duplication of personality. If at the same time we wish good and evil ; if we have criminal impulses and a conscience that reproves them ; if the insane at times recognizes his folly ; if the delirious has moments of lucidity ; if, in fine, some persons believe themselves double, it is simply because the two hemispheres are in disaccord ; the one is healthy, the other is morbid ; one state has its seat to the right,

*Magnan and Dumontpailler, *Union Médicale*, 15 May 1883.

its contrary to the left ; it is a kind of psychological mancinism.

Griesinger, upon encountering this theory, already put forth with diffidence in his day, after quoting the facts which it vindicates, and the case of one of his patients, who "felt himself growing irrational only on one side of his head, that is on the right side," concludes in the following terms : "As to us, we are not by any means inclined to attribute any particularly high value to these facts."*

Have they gained in weight since that time ? It is very doubtful. In the first place (since the theory rests upon a question of number) are there not individuals who believe themselves triple ? I find at least one instance. "In a certain lunatic asylum," says Esquiros, "I have met with a priest, who through the excessive application of his mind to the theological mystery of the Trinity, eventually came to regard all objects around him as triple. He even imagined himself to be in three persons, and requested the attendants to lay three covers for him at table, with three plates and three napkins."†

I believe that by dint of active search we should find other cases of this kind ; but I refrain from availing myself of this case of triplicity which to me seems capable of several interpretations.

Against that theory there could be alleged the best possible reasons, and supported by plain facts. It ultimately rests upon the absolutely arbitrary hypothesis that the struggle is always between *two* states only. Experience contradicts it completely. To

* *Op. cit.* p. 28. See also the negative conclusions of Charlton Bastian upon this point, Vol. II., ch. XXIV.

† *Revue des Deux-Mondes*, 15 Oct. 1845, p. 307.

whom has it not happened, to deliberate upon the advisability of acting in a given sense; to hesitate between acting according to one reason or according to the contrary reason, or to refrain from acting at all, say between journeying northward or southward, or remaining at home? In our lives it repeatedly happens that we have to decide between three alternatives, of which each necessarily excludes the other two. Where shall we locate the third? for it is in this strange form that this question has been mooted.

In a few cases of congenital atrophy of the brain, which seem based upon authentic observations, individuals have been seen who possessed from their infancy only one cerebral hemisphere; yet their intellectual development was not impaired and they resembled ordinary men.* According to the hypothesis we are combating, in these individuals there could not have occurred any internal struggle. However, it is useless to dilate upon this criticism, and I shall content myself by calling to mind Griesinger's comment upon a well-known line in Faust: "Not only two but several souls dwell within us."

In fact this discussion itself would be idle, were it not that it gives us an opportunity of viewing our subject from a different aspect. These contradictions in the personality, these partial scissions of the ego, such as are found in the lucid moments of insanity and of delirium,† in the self-condemnation and reprobation of the dipsomaniac, while he is still drinking, are not oppositions in space (from one hemisphere to the other) but oppositions *in time*. They are—to use a

* Cotard, *Etude sur l'atrophie cérébrale*, Paris, 1868; *Dict. encycl. des sciences médicales*, art. "Cerveau" (Pathologie), pp. 298 and 453.

† Jessen in his *Versuch einer wissenschaftlichen Begründung der Psychologie*, p. 189, reports a curious instance.

favorite expression of Lewes—successive “attitudes” of the ego. This hypothesis accounts for all that the other explains, and in addition it explains what the other theory does not.

If we are thoroughly imbued with the idea that personality is a consensus, we shall have no difficulty in admitting that the body of conscious, sub-conscious and unconscious states which constitute it, may at a given moment be summed up in a tendency or a preponderating state which is its momentary expression to the individual himself and to others. And just as suddenly the same mass of constituent elements is recapitulated in a contrary state, which thereupon assumes the foremost importance. Such is our dipsomaniac, who drinks and at the same time reproaches himself. The preponderating state of consciousness at each moment constitutes to the individual and to others his personality. It is a natural illusion, of which it is difficult to rid ourselves, yet an illusion which rests upon a partial consciousness. In reality there are only two successive attitudes, namely, a different grouping between the same elements with the predominance of a few and that which follows. In the same manner our body can successively assume two contrary attitudes without ceasing to be the same body.

It is clear that three or more states can succeed each other (coexist apparently) through the same mechanism. We are no longer bound to the exclusive number of two. We must, however, acknowledge that this internal scission is more frequent between two contrary states, than between three or a still larger number of states. This depends upon certain conditions of consciousness which must be recalled to mind.

Is there a real coexistence between two states of

consciousness, or such a rapid succession that it appears to be simultaneousness? This is a very delicate question and is as yet unanswered, although at some future day it may be solved by psycho-physicians. Hamilton and others have maintained that we can have as many as six impressions at the same time, but their conclusion is derived from very meagre investigations. The determination, according to strict methods of physical science of the duration of the states of consciousness, is a great step in advance. Wundt has tried to advance even further, and to fix by experiment what he correctly calls the extent of consciousness (*Umfang des Bewusstseins*), that is, the maximum number of states which it can contain at the same time. His experiments only bear upon certain exceedingly simple impressions (the strokes of a pendulum regularly interrupted by the strokes of a small bell), and consequently are not in every point applicable to the complex states that here occupy our attention. He has found "that twelve representations form the maximum extent of consciousness for the successive, relatively simple states."*

Experiment, accordingly, seems to decide in favor of a very rapid succession, equivalent to a coexistence. The two, three, or four contrary states would in reality be a succession.

We know, moreover, according to a frequently used comparison, that consciousness has its "yellow spot," like the retina. Distinct vision is only a small portion of total vision; and clear consciousness is but a small portion of total consciousness. Here we touch the natural and incurable cause of that illusion by virtue of which the individual identifies himself with his

* *Grundzüge der physiol. Psychologie*. 2d Edition, Vol. II, p. 215.

present state of consciousness, above all when it is intense ; and obviously this illusion is by far stronger to himself than to others. We also perceive why apparent coexistence is much easier for two contrary states than for three, and above all than for a larger number. This fact depends on the limits of consciousness ; or to repeat my previous statement, it is an opposition in time and not in space.

Briefly, the relative independence of the two hemispheres is not disputable. The derangement produced in personality through their disaccord is admitted, but to reduce everything to a simple division between the left and the right side is an hypothesis which hitherto has not been supported by any substantial proof.

III.

A few words on the subject of memory. There is no reason why we should study it apart, for it is found everywhere throughout our subject. Personality in fact is not a phenomenon but an evolution ; not a momentary event, but a history ; not merely a present or a past, but both. Let us leave aside what I shall call objective, intellectual memory ; viz. perceptions, images, experiences, and stored up knowledge. All this may disappear either partially or totally ; these are the diseases of memory, of which I have given numerous instances elsewhere.

Let us consider only subjective memory, that of ourselves, that of our own physiological life and of the sensations or feelings that accompany it. This distinction is purely factitious, but it will allow us to simplify.

In the first place, does there exist a memory of this kind ? We might maintain, that in any perfectly healthy individual the vital tone is so constant, that the con-

consciousness which such an individual has of its own body is only a present time, incessantly repeating itself ; but this monotony, if it exists, would on the contrary, by excluding consciousness, favor the formation of an organic memory. In fact, there are always changes taking place however slight they may be, and, as we are conscious only of differences, those changes are also felt. So long as they are feeble and partial the impression of uniformity will persist, because the incessantly repeated actions are represented in the nervous system in a far more stable manner than the ephemeral changes. Their memory by sequence is organized beneath consciousness, and hence is all the more solid. Here lies the foundation of our identity. These diminutive changes will act in the long run, and produce what is called the insensible change. After ten years of absence an object, a monument is seen to be the same ; but it is not *felt* the same ; it is not the faculty of perceiving, but its accompaniment that has changed. Yet all this belongs to the state of health, and is the simple transformation inherent in all that lives and evolves.

Here, then, we have the vital habitude of an individual represented by another habitude, viz. organic memory. Let us suppose the entrance of causes, almost unknown, of which we are only able to verify the subjective and objective effects. They produce a deep, sudden or at least rapid and persistent transformation of the cœnesthesis. What will then happen ? Experience alone can return an answer, since ignorance of the causes reduces us to pure empiricism. In extreme cases, and we shall not notice others, the individual is changed. As regards memory this metamorphosis is met with under the following three principal forms :

1. After a more or less protracted period of transition, the new personality alone remains; the old personality is forgotten (as in the case of the patient of Leuret). This case is a rare one. It supposes that the old cœnesthesia has been entirely abolished, or at least, has for all time become inactive and incapable of reviviscence. We need not wonder at meeting so seldom with a case of this kind, when we consider that the *absolute* transformation of personality, that is, the substitution of one personality for another—completely so without reserve and without any link connecting the present with the past—supposes a radical change within the organism. To my knowledge there does not exist any case in which the second personality has not inherited at least a few relics of the other, were it only certain acquisitions become automatic, such as walking, speaking, etc.

2. Generally, the old organic memory will subsist below the new sense of the body, which has been organized and which has become the basis of the existing ego. From time to time it will return to the consciousness, weakened like any youthful recollection that has not been revived by repetition. This reviviscence probably has for its cause some background common to the two states; and then the individual appears to himself as another. The existing state of consciousness will evoke one that is similar, but which has a different accompaniment. The two appear as *mine*, although they contradict each other. Such are those patients, who find that all remains the same, and nevertheless that everything is changed.

3. Finally, there are the cases of alternation. Here it is hardly doubtful that the two subjective memories—the organized expression of the two cœnestheses—

subsist and by turns predominate. Each is accompanied by, and puts into activity, a certain group of feelings, of physical and intellectual aptitudes, which do not exist in the other. Each forms a part of a distinct complexus. The case of Azam affords an excellent example of the alternation of two memories.

Upon this subject we could not say anything more without falling into repetitions, or without accumulating a number of hypotheses. Ignorance of the causes arrests our progress. The psychologist is here like a physician who is confronted by some disease that only betrays its symptoms. What then are the physiological influences that thus change the general tone of the organism, consequently the cœnesthesis and the memory? Is it through some condition of the vascular system? Is it an inhibitory action, an arrested function? No one can say. Until this problem has been solved, we cannot penetrate beneath the surface of the question. We have simply wished to show that memory, although in some respects blended with personality, is not its last foundation. Memory rests upon the state of the body whether conscious or not, and depends upon it. Even in the normal state the same physical situation has a tendency to recall the same mental situation. I have frequently remarked that at the moment of falling asleep, some dream of the preceding night, until then entirely forgotten, will suddenly return to my recollection completely and vividly. In travelling, when leaving one town to sleep in another, this reproduction will sometimes take place; but my dream will then emerge in disconnected fragments, which it is difficult to reconstruct. Is this the effect of the physical conditions—alike in the former instance, slightly modified in the latter? Although I

have not seen the above fact mentioned in any work on dreams, I doubt whether it is a particular and exclusive experience of my own.

Then again, there are other well-known facts, even more conclusive. In natural or induced somnambulism the events of former states, forgotten during wakefulness, will return during the hypnotic state. Let us recall to mind the well-known story of the carrier, who while intoxicated lost a packet, which he was unable to find when sober; he got drunk again and then found it. Is there not in this instance a marked tendency toward the constitution of two memories—the one normal, the other pathological—expressions of two distinct states of the organism, and which are like embryonic forms of the extreme cases that we have spoken about?

IV.

The part played by ideas in the transformations of personality, has already been incidentally mooted. Let us now watch this new factor at work, in order to verify what results it produces by itself separately. Among all the numerous elements, the consensus of which constitutes the ego, there is, perhaps, not any one of them that can more easily be set apart, and artificially separated. Still, as regards this point, we must be careful to avoid equivocation. To the conscious individual the idea of his personality may be an effect or a cause, a result or an initial factor, a point of arrival or a point of departure. In the healthy state it is always an effect, a result, a point of arrival. In the morbid state it is both cause and effect. In many of the examples that have been enumerated we have seen organic, emotional or sensorial derangements pro-

duce such an exuberance, or such a vital despondency that the individual will declare that he is a god, king, giant, great man; or, on the other hand, that he is an automaton, a phantom, or a corpse. These erroneous ideas are evidently the relatively logical conclusion of the profound transformation of the individual—the definitive formula that recapitulates and completes it. But there are also entirely contrary cases, in which the transformation of personality is not from above but from below; and in which the transformation begins, but is not completed in the brain; and consequently the idea is not a conclusion, but a premise. It doubtless would seem exceedingly rash to maintain that in many instances where a wrong idea serves as a starting-point for a change of the ego, it has not below it and in advance of it some organic or emotional derangement. On the contrary we may confidently assert that such will always be present, even in hypnotised individuals, in whom personality is changed by suggestion. Between the two forms of metamorphosis above indicated there does not exist a clear line of demarcation; the term “ideal metamorphosis of personality” is but a designation *à potiori*. Having made this exception, let us examine this new aspect of our subject, starting, as we have hitherto, from the normal state.

Nothing is more frequent or better known than the momentary dispossession of personality through some fixed and intense idea. So long as this idea occupies the consciousness, we might without much exaggeration say that it constitutes the individual. The obstinate pursuit of any problem, invention or research in all their various forms, represents a mental state in which the entire personality has been drained for the

benefit of a single idea. Such an one is, to use a common expression, absent, that is automatic. Here there is an abnormal state, implying a rupture of equilibrium. Numberless current anecdotes concerning either rational or chimerical inventors bear witness to the fact. And incidentally let us observe, that every fixed idea is at the bottom a sentiment or a fixed passion. At all times some desire, love, hatred, or interest will support the idea, and impart to it its intensity, stability, tenacity. Whatever we may plead to the contrary, ideas are always in the service of passions; at the same time they resemble some masters, who actually obey while believing that they always rule.

Whatever may be the result, this state is but a mental hypertrophy, and people are perfectly right, when in identifying the inventor and his work, they designate the one by the other; in this instance work is equivalent to personality.

Up to this point we have no change of personality, but a simple deviation from the normal type, —or, what is better, the schematic type,—in which by hypothesis the organic, emotional, and intellectual elements would form a perfect consensus. Hypertrophied at one point and atrophied at some other points, by virtue of the law of compensation or of organic equilibrium. And now let us consider the morbid cases. With the exception of certain artificial changes, produced during hypnotism, it is difficult to find many cases of derangement the incontestable starting point of which is an idea. Among changes of personality, from an intellectual cause, it appears to me we may class the facts relating to lycanthropy and zoanthropy, in all their forms, formerly of frequent occurrence, but now very rare. Still, in all cases

of this kind* of which we have an authentic record, the mental debility in the lycanthrope is so great, almost verging on stupidity, that we might almost be tempted to look upon it as a case of retrogression; a return toward the form of animal individuality. Let us add, that inasmuch as these cases are complicated with visceral disorders, cutaneous and visual hallucinations, it is not easy to see, whether they are the effects of a preconceived idea, or whether they themselves produce it. We must remark, however, that lycanthropy has at times been epidemic, which is to say, that at least in imitating subjects, it must have originated in some fixed idea. Finally, this type of disease disappeared, when people no longer believed in it, that is to say, when the idea that a man is a wolf, could no longer fix itself in the brain of an individual, and make him act accordingly.

The only perfectly clear cases of ideal transformation of personality, are those already cited, of men who believe themselves women, and of women who believe themselves men, without any sexual anomaly justifying that metamorphosis. With subjects who are possessed, demonomaniacs, the influence of an idea also seems initial or preponderating. It frequently acts by contagion upon the exorcists themselves. To quote only one instance of this, Father Surin, who for so long a time was concerned in the notorious affair the Ursuline Nuns of Loudun, felt within himself two souls, and sometimes as it seems, even three.†

* See Calmeil: *De la folie considérée sous le point de vue pathologique, philosophique, historique et judiciaire*. Vol. I, Bk. III, Ch. II, §§ 9, 16, 17; Bk. IV, Ch. II, § 1.

† P. Surin left a detailed report of his own mental state: *Histoire des diables de Loudun*, p. 217 and following. "I am not able to describe to you what is going on within me at such a time (he alludes to the time when the demon passes from the body of the possessed woman into his own), and how

In other words, the transformations of personality by effect of an idea are not of a very frequent occurrence; and this is a fresh proof of what we have again and again repeated, that personality rises from below. It is in the highest nervous centres that personality attains its unity, affirms itself with full consciousness; in them it completes itself. If through some inverse mechanism personality descends from above to below, it will remain superficial, precarious, momentary.

The creation of artificial personalities with hypnotised subjects affords an excellent proof of the above; and to this effect M. Ch. Richet has published very abundant and precise observations,* which I shall briefly quote. By turns they make the hypnotised subject (usually a woman) believe that she is a peasant-girl, an actress, a general, an archbishop, a nun, a sailor, a little girl, etc., and the subject will play all these parts to the degree of perfect illusion. Here the psychological data are perfectly clear. In this state of provoked somnambulism, the real personality remains intact; the organic, emotional, intellectual ele-

that spirit unites itself with mine, without depriving me either of consciousness or of the freedom of my soul, yet becoming like another ego of myself, and as if I had two souls, of which one is dispossessed of its body, and of the use of its organs, and compelled to keep aloof, looking merely upon the doings of the other intruding soul. The two spirits wrestle together in the same field, which is the body, and the soul is as though it was divided. According to the one side of its ego, the soul is the subject of the diabolical impressions, and according to the other side it is the subject of the movements proper to it, or that God gives to it. When—through the movement of one of these two souls—I wish to make a sign of the cross upon somebody's lips, the other soul very quickly turns my hand and seizes my finger to bite it furiously with the teeth. . . . When I wish to speak, I am stopped short; at table I cannot raise a morsel of food to my mouth; at confession I suddenly forget my sins and I feel the demon coming and going within me as in his own house."

* *Revue Philosophique*, March 1883. M. Richet has published more recent observations in his book *L'homme et l'intelligence*, p. 539 and 541. See also Carpenter: *Mental Physiology*, p. 562 and following.

ments have not undergone any important change ; but all remain in a potential state. An imperfectly understood condition of nervous centres, an arrest of function, prevents them from passing into action. An idea is evoked by way of suggestion, and at once, through the mechanism of association, it excites analogous states of consciousness, and no others ; and with them,—always by association,—appropriate gestures, acts, words, and sentiments. In this manner there is constituted a personality external to the real personality, composed of borrowed and automatic elements. Experiments of this kind clearly show what an idea may achieve when freed from all control, and reduced to its own power and destitute of the support and co-operation of the individual in its totality.

In certain cases of incomplete hypnotism a dualism is produced. Dr. North, professor of physiology at Westminster Hospital, says, when speaking of the period during which he was affected by the fixed look : "I was not unconscious, but it seemed to me that I was existing in double. I imagined that within there existed another ego, perfectly alive to all that happened, but which did not care to interfere with the acts of the external ego, or to control them. The repugnance or incapacity of this internal ego to control the external ego seemed to increase in proportion as the situation was further prolonged."*

*Hack Tuke, "On the mental condition in hypnotism" in *The Journal of Mental Science*, April, 1883. In this article is also found the case of a physician, who during an uneasy sleep after twenty hours' climbing in the Alps becomes double in his dream : one of the two egos dies, and the other makes its autopsy. In certain cases of intoxication and delirium the psychic coördination disappears, and there is produced a kind of scission of the person into two. See the articles of Dr. Azam on changes of personality (*Revue Scientifique*, Nov. 17, 1883) and of Dr. Galicier (*Revue Philosophique* July, 1877, p. 92). Taine has reported a curious case of semi-pathological incoördination : "I have seen a person, who while conversing or singing, will write, without

But, would it be possible to suppress this true, internal personality? Can the real character of the individual be reduced to naught or to the point of actually transforming itself into its contrary? We cannot doubt this possibility; the persisting authority of the operator is indeed able to effect this result, after a more or less prolonged resistance. Thus M. Ch. Richet has impressed with radical republican ideas a lady known for her ultra-Bonapartist opinions. Braid, after hypnotising a strict teetotaler, several times repeated to him that he was drunk. "This affirmation being also corroborated by a sensation of staggering (produced by way of muscular suggestion), and it was amusing to behold him divided between this imposed idea and the conviction resulting from his ordinary habits."* This momentary metamorphosis however has nothing alarming about it. As M. Richet justly remarks, "in these curious modifications the changes that take place are only in the external form of the being, in habit and general attitudes and not in individuality properly so called." As to the question, whether by means of reiterated suggestions, we might not eventually produce in susceptible subjects a genuine modification of character, it is a problem that experience alone can solve, and besides it is beyond the aim of our present purpose.

looking at the paper, connected phrases, and even whole pages, being quite unconscious of what she writes. To me her sincerity is manifest; for she declares when arrived at the bottom of the page, she has not the slightest idea of what she has been tracing on the paper; when she reads those ideas, she is herself astonished, even sometimes alarmed. The handwriting is different from her ordinary style. The movement of the fingers is stiff, and seems automatic. Her writing always finishes with a signature—that of a deceased person—and bears the impression of secret thoughts, of a mental background which the author is not inclined to divulge." (*De l'intelligence*, 3d edit. pref. pp. 16-17.)

* Richet, *Op. cit.* p. 541; Carpenter, *Op. cit.* § 368.

Perhaps this is a favorable opportunity to call attention to the phenomenon known as *disappearance of personality*, which the mystics of all epochs and of all countries have described according to their own experience, often in the most glowing language.* Pantheistic metaphysicians without reaching the state of ecstasy have also spoken of a state in which the spirit thinks itself "under the form of eternity"; appears to itself as beyond time and space, free from all contingent modality, one with the infinite. This psychological phenomenon although rare must not be forgotten. I take it to be the absolute dispossession of mental activity effected by a single idea (positive to mystics, negative to empirics), but which through its high degree of abstraction, and its absence of determination and limit, contradicts and excludes all individual sentiment. But let one single sensation however ordinary be perceived and the entire illusion will be destroyed. This extraordinary state is neither

*Of these descriptions I shall only cite one—the nearest to us by language and time. "It seems to me that I have become a statue on the banks of the river of time, and am attending the celebration of some mystery from whence I shall come forth old or without age. I feel as it were anonymous, impersonal; my eye is fixed as in death: my mind is vague and universal, as nihilism or the absolute. I am in suspense; as if non-existent. In these moments it seems to me that my consciousness withdraws into its eternity . . . it perceives itself even in its substance, superior to every form containing its past, present, and future; a vacuum that encloses everything; an invisible and prolific medium; virtuality of a world divesting itself of its own existence, in order to lay hold of itself again in its own pure inwardness. In these sublime instants the soul has re-entered into itself; and having returned to the state of indetermination it is reabsorbed beyond the bounds of its own life, it becomes again a divine embryo. Everything is effaced, dissolved, distended; changed into its primitive state, re-immersed in the original fluidity, without shape, angles, or definite design. This state is contemplation and not stupor; it is neither painful, nor joyous, nor sad; it is without all special sentiment and beyond all finished thought. It is the consciousness of being, and the consciousness of the latent omnipossibility at the base of this being. Such is the sensation of the spiritual infinite." (Amiel, *Journal intime*, 1856, cited by M. Schérer in his preface.)

above nor below the personality, but without and beyond it.

To sum up: The states of consciousness that are called ideas, are only a secondary factor in the constitution and changes of personality. The idea certainly plays a part, but not a preponderating one. These results agree with what psychology has long since taught, namely, that ideas have an objective character. Hence it follows, that they cannot express the individual in the same proportion as his desires, sentiments, and passions.

CHAPTER IV.

DISSOLUTION OF PERSONALITY.

I.

IN closing our review of these facts, I must not omit to say a few words regarding changes of personality in cases of progressive dementia, caused by old age, general paralysis, or any other morbid condition. Bearing in mind that in the normal state personality depends upon the most perfect possible psycho-physiological co-ordination, which maintains itself despite perpetual changes and partial and transient incoordinations (such as sudden impulses, eccentric notions, etc.), then dementia, which is a progressive movement toward physical and mental dissolution, ought to reveal itself in the form of an ever increasing incoordination, until the moment when the ego entirely disappears in absolute incoherence, and there only remain in the individual purely vital co-ordinations, viz., those that are best organised, the lowest, simplest, and consequently the most stable, which in their turn must also disappear. It is perhaps in these cases of progressive and inevitable dissolution alone that we find double personality in a strict sense, that is *coexistent* personalities. (We have in the course of this work, found many cases of successive personalities) (those of Azam, Dufay, Camuset); others in which a new personality had been substituted for a forgotten or ex-

elled one, considered as external and foreign (cases of Leuret, of the Austerlitz soldier); finally the invasion of the normal personality by unusual sensations, which it resists as well as it can, and which *sometimes and momentarily* cause the patient to believe himself double (case of Krishaber, etc.). But in demented subjects the disorganisation actually organises itself: they really are double, believe themselves double, act as double personalities. To them there exists no doubt. They do not even preserve that remnant of indecision, which in the numerous cases I have cited, show that normal personality (or what remains of it) still retains at least a residuum of power, which after weeks or months will ensure its final return. To them it seems as natural to be double, as to us it is to be of one personality. On their part there is no scepticism as regards their own state, and they do not admit of any in others. Their manner of being, given them by their consciousness, appears to them with a character of such clearness and evidence as to be above all doubt, and not open to question. It is important to take note of this point, because it shows in all morbid forms of personality that spontaneity of affirmation and of action which characterizes every natural state.) The following are two instances of this kind. An old soldier, D . . . , who afterwards became sergeant of police, several times sustained severe injuries to the head, these were followed by a gradual loss of memory which rendered him incapable of performing his duties. His mind grew more and more clouded, until finally he believed himself double. "In speaking he always uses the pronoun *we*: *we shall go, we have walked much, etc.* He explains that he speaks in this way because there is another subject within him. At

table he says: "I have had sufficient, but the other has not." He starts running; and upon being asked why he is running he answers that he would prefer to rest, but that 'the other' forces him to run, notwithstanding that he tries to hold him back by the tails of his coat. One day he pounces upon a child and tries to strangle it, saying that it is not himself but 'the other.' Finally, he tries to commit suicide in order to kill 'the other' whom he believes to be concealed in the left side of his body, and whom he therefore calls by the name of the left D . . . as opposed to himself, the right D . . . This patient became by degrees entirely demented."*

A case reported by Langlois takes us one degree lower still. "The subject G . . . is imbecile, shiftless, loquacious, without hesitation in speech, and free from paralysis or derangement of the cutaneous sensibility. Notwithstanding his loquacity, he only repeats certain stereotyped phrases. He always speaks of himself in the third person; almost every morning he receives us by saying: 'G . . . is sick, he ought to be taken to the infirmary.' Frequently he will go down upon his knees and soundly box his own ears, then laugh immoderately, and rubbing his hands with an air of satisfaction exclaim: 'G . . . has been naughty, and had to be punished.' He will also seize his wooden shoe, and violently strike his head, thrust his nails into his cheeks and tear the flesh. These moments of fury occur suddenly and while they last his countenance expresses anger, which is followed by an expression of satisfaction as soon as he has ceased to correct the other. When he is not over-excited from his imaginary resentments, we ask him: 'Where is

* Jaffe, *Archiv. für Psychiatrie*, 1870.

G . . . ?' 'Here he is,' he answers, striking his chest. We touch his head, asking him to whom it belongs. 'That,' says he, 'is the pig's head.' 'Why do you strike it thus?' 'Because the pig's head has to be punished!' 'But just now you have struck G' 'No, G has not done wrong to-day; it is the pig's head that must be beaten.' During several months we asked him the same questions and invariably obtained the same answers. Generally it is G who is discontented, but sometimes it is the opposite that takes place, in which case the head is not struck."*

A patient who suffered from general paralysis, in a state verging on dementia, was incessantly giving himself advice and reproaching himself. He would say: "You know, Mr. G, that you have been placed in this establishment, and here you remain. . . . We warn you that we entirely despair of your recovery, etc., etc." In proportion as the general paralysis progressed his words became less intelligible. Still, in the midst of his delirium this conversation with himself could always be detected. Sometimes he would ask questions and answer them himself. The patient continued to exhibit this phenomenon even when the dementia was complete. He would shout and become excited; but soon he would calm down, and say to himself in a low voice and with a marked gesture: "Will you be quiet, and speak lower." Then he would reply, "Yes, I will speak lower" Another time we find him very busy making all the movements of tasting something and spitting. We ask him: "Are you amusing yourself, Mr. G?" He answers: "Which?"—and thereupon relapses into

* *Annales medico-psych.*, sixth series, Vol. VI, p. 80.

complete incoherence. This reply, textually reproduced here along with the question, may seem the result of chance, but, it accords so perfectly with the notion of duality so long observed in the patient, that we have considered it worthy of mention.*

In the following observation the dissolution of personality presents itself in a different aspect: the individual here is no longer conscious of a part of himself, which has become estranged from or hostile to him. In speaking of hallucinations we have already seen that the patient gives them by degrees bodily form, and finally makes for them an objective existence. In demented patients the case is more serious. It is here a question of acts or states perfectly normal to any healthy subject and having nothing of the morbid and imaginary character of hallucinations; yet the patient perceives them as external, and is not conscious of being the cause of them. How then are we to explain a situation of this singular kind without admitting a profound change of the *cœnesthesis*; without supposing that certain parts of the body are no longer represented or felt within the collapsed brain. Visual perception indeed still subsists (experience proves it); but the patient sees his own movements as an external, antagonistic phenomenon, which he attributes neither

* Descourtis, *Du fractionnement des opérations cérébrales et en particulier de leur dédoublement dans les psychopathies*. Paris, 1882, pp. 33-34. For other facts see pp. 32 and 35. It is possible that the second personality, advising and admonishing the other, is only the purely passive reproduction of the phrases addressed to the patient by his physician or attendants. Let us also remark that it is not by any means uncommon for demented subjects to speak of themselves in the third person. This may also be observed in little children, and has been accounted for by the fact that their personality has not as yet revealed itself. In my opinion it is simply a phenomenon of imitation. The child is accustomed to hearing such remarks as: "Paul has been naughty, he will be whipped," etc. The child thereupon addresses itself in the same manner. Could the use of the third person by certain demented subjects be a case of retrogression?

to himself nor to others and verifies only passively without searching further, because, his internal sensations having been abolished, and his faculty of reasoning being powerless, there is no help against the existing incoördination.

Then we have the case of the man suffering from general paralysis in the period of dementia, whose utterance had become almost unintelligible, and whose knowledge of the external world had likewise become very vague. "One day he was engaged in picking peas. Although awkward he was naturally right-handed, but now employed only his left hand. Suddenly the right hand would stretch forth, as if to perform its share in the work, but hardly had it reached its object, when the other hand would seize it and violently restrain it. At the same time the countenance of the patient expressed much anger, and he would repeat in a commanding tone: 'No, no!' His frame shook with sudden fits of excitement, and everything betrayed a violent struggle raging within him. At another time when they had to tie him in an arm chair, his features grew clouded, and seizing his right hand with his left he cried out: "Look! it is your fault; it is all through you that they have bound me here," and thereupon he struck the offending hand repeatedly.

"These two occurrences are by no means isolated. At different times it was observed that whenever the right hand emerged from its customary inactivity, the patient would stop it with his left. He would grow angry and excited, and strike at the hand as violently as his strength allowed him. Sensibility was still preserved in the upper right-hand member as elsewhere, although it had grown dull."*

* Descourtis, *Op. Cit.* p. 37.

Some demented patients impute to others the sounds which they themselves utter, and complain of being disturbed by their cries. Finally, we shall quote a case, observed by Hunter, of an old man whose faculties were extremely enfeebled. He incessantly referred to the present time the incidents of his earlier days. "Although able to act correctly, according to certain impressions, and to attribute them to those parts of his body which they really affected, he persistently imputed his own sensations to those who surrounded him. Thus he would say to his keeper and the assistants that he was sure *they* were hungry or thirsty. But if food or drink was brought to him, it was evident from the avidity with which he accepted it that the absurd idea in question had been suggested to him by his own feeling of hunger and thirst, and that the word *they* referred to himself, and not to the others. He was subject to violent fits of coughing, and after each paroxysm he would resume the thread of the conversation; but not before having expressed, in appropriate terms, how sorry he was to perceive the sad state of his friend's health. 'I am grieved,' he would say, 'to see *you* suffering from such a painful and exhausting cough.' " *

By degrees all these cases terminate in an ever increasing incoördination and complete incoherency. They approach to that congenital imbecility which has never been able to reach the average level of human personality. In idiots, that co-ordination of multiple and ascending degrees which constitutes the normal man, has been arrested in its development. In such cases evolution has not proceeded beyond the first stage. It has merely provided for the physical

* Hunter. See Winslow's work, *On Obscure Diseases of the Brain*, p. 278.

life and with it a few elementary psychic manifestations; but the conditions of an ulterior development have been lacking. At the close of the present treatise, accordingly, we shall have to inquire more minutely into the fact of co-ordination as the basis of personality.

II.

Before proceeding further let us make a cursory classification of the derangements of personality of which we have given so many illustrations, so unlike among themselves that at first it seems impossible to reduce them to a few fundamental types.

Although in the normal state the sense of our body may change in different manners in the course of life, —above all through that evolution which carries us onward from birth to death—still the change is usually so slow and continuous that the assimilation of new sensations takes place gradually; the transformation is imperceptible; and in this manner is realized what we call identity, viz. an apparent permanency amidst incessant variations. However, serious diseases, or certain radical changes, e. g. climacteric periods, puberty, etc., will induce some indecision; the fusion between the new and the old state is not immediate, and, as has been observed, “at first the novel sensations present themselves to the old ego as a foreign ego, exciting surprise.” But if the general sense of the body is suddenly modified, if there is produced a sudden, abundant afflux of unusual states, then the fundamental element of the ego is likewise completely transformed; the individual becomes separated from its former personality, appears to itself like another. Most frequently there occurs a period of derangement

and uncertainty; the rupture is not instantly achieved. When this morbid state has become fixed, one of the following three types of diseases of personality will, in our opinion, be presented.

1. The general sense of the body is completely changed. The new state serves as basis for a new psychic life; a new manner of feeling, perceiving, thinking, whence results a new memory. There remains of the old ego only the completely organized functions, such as walking, speech, manual work, etc., purely automatic, almost unconscious activities, which like slaves are ever ready to serve any master. We must further remark that this type presents in reality certain exceptions. Occasionally a part of the automatic acquisitions do not enter into the new ego. Then again, at distant intervals, a few vestiges of the old personality are revived, and throw a transient indecision into the new one. Taking a general view of the symptoms, and disregarding unimportant deviations, we may say that we have here an *alienation* of personality, the old having grown *alien* to the new, so that the individual is ignorant of its former life, or when reminded of it contemplates it objectively, as separated from itself. A typical instance of this is found in the woman of Salpêtrière who from her forty-eighth year onward spoke of herself as "the person of myself." Concerning her former personality she would give much correct information, always attributing it, however, to another: "The person of myself does not know her who was born in 1779" (her own former personality).* The case of "Old Lambert" (see p. 34) also belongs to this type. Hack Tuke records the case of a patient who during several years was an inmate of Bedlam Hos-

* For a full account of this case see Leuret, *Frag. psychol.*, pp. 121-124.

pital. This patient had lost the ego that was familiar to him, and was in the habit of searching for himself under the bed.*

2. The second type has as basic character the *alternation* of two personalities, and to this type especially belongs the current designation of double consciousness. We have already observed that between the first and second type we should find certain forms of transition; but for the present we shall only consider those cases that are clear and well defined. The physical cause of this alternation is very obscure, one might say unknown. At the time when the second personality first appears, these cases do not differ from those of the first class; the difference begins with the reappearance of the first personality. It is difficult to resist the hypothesis, that in these patients, usually hysterical subjects—that is to say, pre-eminently unstable—there exist among the secondary changes in the physical life two distinct *habitus*, each of which serves as a basis for a psychic organization. This seems all the more probable, when we remember that the alternation in question bears upon character, upon that which is innermost in personality, and which most deeply expresses individual constitution (e. g. the cases of Azam, Dufay, Camuset).

We have also in this type of alternation different forms. Sometimes the two personalities are both ignorant of each other (case of Macnish). At other times the one embraces the whole of life, the other being only partial; such is the case of Azam. Finally in this case—which is the most instructive, because it now covers a period of twenty-eight years†—we behold

* *The Journal of Mental Science*, April, 1883.

† In 1885.

the second personality constantly encroaching upon the first ; which having been very long originally, becomes by degrees shorter and shorter, so that we can foresee a time when it will completely disappear, and the second only will remain. It would seem accordingly that this state of alternation when it is prolonged, has a fatal tendency toward reducing itself to the first type, occupying thus an intermediate position between the normal state and the complete alienation of personality.

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3. The third type is more superficial ; I shall call it a *substitution* of personality. To this type I refer the rather common cases in which the individual simply believes his or her condition to be changed ; e. g. a man declares himself to be a woman, and *vice versa* ; a rag-picker believes himself a king, etc. The state of certain hypnotized subjects, of whom I have spoken, may serve as examples of this class. The alteration is rather psychical in the strict sense of the word, than organic. I do not for a moment suppose that it arises and persists without material conditions. I only wish to say, that it is not as in the two preceding groups caused and supported by any deep modification of the sense of body, which carries with it a complete transformation of person. It proceeds from the brain, not from the inmost depths of the organism ; and is rather a local than a general disorder,—the hypertrophy of a fixed idea, which renders impossible the co-ordination that is necessary to the normal life of the mind. Hence, while in alienation and alternation of personality everything conspires and co-operates in its way, exhibiting a logical internal unity of the organic compounds, it is not uncommon for him who claims to be a king to admit he has been a workingman, and

for the pretended millionaire to confess that he used to earn two francs a day. Even irrespective of these cases, in which the incoördination is obvious, we can easily see that a fixed idea is but a diseased excrescence which by no means indicates a total transformation of the individual.

This classification, proceeding from the most serious to the most trivial forms, makes no pretensions to completeness. It merely serves to bring something like order into a mass of facts: to show how unlike they are; and, above all, once more to demonstrate that personality has its roots in the organism, and that it changes and is transformed along with it.

CONCLUSION.

I.

It is an inevitable consequence of the doctrine of evolution that the higher forms of individuality must have proceeded from the lower by way of aggregation and coalescence ; and further also, that individuality at its highest degree, in man, is the accumulation and condensation in the cortical layer of the brain of elementary consciousnesses that were autonomous and dispersed at their origin.

All the different types of psychic individuality in the animal series, from the lowest to the highest, could be described and fixed only by a psycho-zoölogist, and at the cost of much groping amidst uncertainties and conjectures. Hence we shall merely call attention to a few types, in view of the principal aim of the present work, which is to demonstrate that the ascending progress toward higher individuality is summed up in an increasing complexity and coördination.

When we speak of a man, a vertebrate, or even of an insect, nothing can be clearer than the term "individual"; but nothing is more obscure in proportion as we descend the scale. Upon this point all zoölogists are perfectly agreed.* According to the etymology of

* See in particular: Haeckel, *General Morphology*; Gegenbaur, *Comparative Anatomy*; Espinas, *Sociétés animales*, second edit., Appendix II; Ponchet, *Revue scientifique*, Feb. 10, 1883, etc.

the word, the individual (*individuus*) is that which is not divided. In that case, the individual, in the strict and exclusive sense of the word, must be sought for at a very low stage. While there is nothing to limit the dimensions of inorganic compounds (crystals), "every protoplasmic mass which has attained a few tenths of millimeters at the maximum, spontaneously divides itself into two or several distinct masses, equivalent to the mass from which they are derived, and which are reproduced in them. Protoplasm, accordingly, exists only in the *individual* state, having a limited size ; and this is why every living being is necessarily composed of cells."* Life could not attain to any considerable growth except by means of an infinite repetition of the same fundamental theme, through the aggregation of an infinite number of small elements, as the real types of individuality.

The living and homogeneous matter constituting these elementary, primordial individualities unfolds itself, rolls itself up, lengthens out into tiny filaments, moves from place to place, creeps toward substances adapted to its nutrition, absorbs them, decomposes them, and assimilates their atoms with itself. In this sense scientists have spoken of "rudiments of consciousness," of an obscure volition, determining itself under the action of external stimulations and vague cravings. We may certainly employ this term in default of a better, but we must not forget that it has no precise signification for us. In a homogeneous mass which does not present the slightest trace of differentiation, in which the vital and essential

* Perrier, *Les Colonies animales et la formation des organismes*. Paris, 1881, p. 41. According to Cattaneo: *Le Colonie lineari e la morfologia dei molluschi*, the division might be carried still further.

properties (nutrition, generation) are in a state of diffusion and indistinctness, the only and rather humble representative of psychic activity is simply the irritability common to all living beings, which later in the course of evolution will become general sensibility, special sensibility, and so on. Can this be called a consciousness?

The first step towards a higher individuality consists in an association of individuals almost completely independent of each other. "Nevertheless, enforced proximity, the continuity of the tissues, and almost constant unity of the digestive apparatus, establish among them a certain number of relations, and these prevent the individual from remaining a perfect stranger to what takes place among its nearest companions. Such is the case with sponges, colonies of hydra-polyps, coralline polyps, bryozoans, and a few colonies of ascidians.* Yet, properly speaking, all this is but a juxtaposition, an intertwine of a heap of small, contiguous, and homogeneous consciousnesses, not having among themselves any other community than that given them by the limitation of their assemblage in space.

The birth of a colonial individuality and consciousness marks a great step toward co-ordination. Being formed of elementary individualities, such a colony tends toward transforming itself into an individuality of a higher order, in which a division of labor takes place. In colonies of *Hydractinia* we meet with seven different kinds of individuals—nurses or feeders, reproducers, others of either sex (male and female), others that feel or seize their prey, etc. In the siphonophorous species, among *Agalmidæ*, whose entire organism

* Perrier, *Op. cit.* p. 774; Espinas, *Des sociétés animales*, section 2.

measures more than a metre, and in similar types, the faculty of locomotion is completely centralised. The individuals that compose it seem independent, while the animal allows the common axis upon which they are imbedded to float; but when in danger, or if the animal wishes to execute any complex movement, the axis contracts, and drags along with it all the polyps. *Physalia* (Portuguese man-of-war) is able to accelerate or slacken its movements, to emerge or dive at will, ascend, descend, go straight forwards, or swerve aside; it can make all its individual organs concur in these complicated acts. An errant life, as observed by M. Perrier, seems to favor the development of individuality. "Thence there necessarily results a greater dependence of all the individuals; more intimate bonds are established among them; the impressions produced upon any part of the whole must necessarily be transmitted to the locomotory parts; and the movements of the latter must be co-ordinate, or all would be in disorder. There accordingly arises a kind of *colonial consciousness*; through which the colony tends towards constituting a new unity, and toward forming what we call an *individual*."* As regards other colonies the common consciousness is formed in a different manner. In *Botryllidæ* (tunicaries) there is a common orifice, the cloaca, round which are disposed all the individuals. Each of them emits toward the cloaca a tongue-like member provided with a nervous process, by the aid of which communication can be established in a permanent manner between all the members of the same group.† But "because one colony acquires the notion of its own existence as a

* Perrier, *Op. cit.* pp. 232, 239, 770, 248, and 262.

† *Ibid.*, p. 771.

colony, it does not follow necessarily that each of the individuals that compose it loses its particular consciousness. On the contrary, each individual continues to act as if it were single. . . . With certain kinds of star-fish each separate arm continues to creep, to follow a determined route or to deviate from it, as the case may happen, to quiver when it is excited, and to betray, in a word, real consciousness. The consciousness of a ray is nevertheless subordinate to the consciousness of the whole star-fish as is proved by the harmony which is established between the movements of the several parts, when the animal changes its position."*

As regards man, in whom centralisation is developed to a very high degree, it will always be exceedingly difficult to obtain anything like a clear idea of a mode of psychic existence in which partial individualities and a collective individuality are found coexisting. Strictly speaking, we might find an analogue to this in certain morbid states. We might further say that the human individual is conscious of itself at the same time as a person and as a member of the body social; but I shall avoid comparisons that might be contested. Taking the question objectively and looking at it from without,—the only accessible point,—we shall see that this colonial consciousness, howsoever intermittent and feebly co-ordinated it may have been at its origin, still marks a capital moment in the process of evolution. Colonial consciousness, in fact, is the germ of higher individualities,—of personality itself. By degrees it will pass to the foremost rank, appropriating for its own profit all special individualities. In the political order we see an analogous

* *Ibid.*, pp. 772-773.

evolution in strongly centralized countries. The central power, at first very feeble, hardly recognised, and often less important than its subordinates, is strengthened at their cost, and has, by absorbing them, slowly reduced them.

The development of the nervous system—pre-eminently the factor of co-ordination—is the visible sign of a progress toward a more complex and more harmonious individuality. But this centralization is not established all at once. Among the annelidous animals the cerebroid ganglia, which emit nerves to the organs of the senses, seem to discharge the same functions as the brain of the vertebrates. Still, complete centralization is far from being effected here. The psychological independence of the different rings is perfectly evident. “Consciousness, which is more distinct in the brain, has a tendency toward growing fainter in proportion as the number of rings increases. Certain *Euniceæ* (a group of Annelids) which may attain to a length of 1.5 metres, bite the posterior extremity of their body without seeming in the least to feel it. To this diminution of consciousness we have doubtless to attribute the facility with which Annelids, held in captivity under disagreeable conditions, voluntarily mutilate themselves.” In linear colonies, the individual forming the front, being compelled to take the initiative for all the others, to advance or retreat, to modify the attitude of the colony which it drags behind,—becomes a *head*; but it must be understood that zoölogists only use this term comparatively, and we must not assume that it exactly corresponds to what is called a head in an insect or any other articulated animal. The individuality which it represents is to such a degree transitory, that in certain asexual

Annelids, composed of some forty rings, we see the head of a sexual individual form at the level of the third ring, furnish itself with tentacles and antennæ, and thereupon detach itself from the primitive individual in order to live its own life.*

As regards details we refer the reader to other special works ; it is unnecessary to dwell upon the subject of higher animals ; individuality in the usual sense of the word is constituted ; and is represented by the brain becoming more and more predominant. But this digression into the domain of zoölogy will not be in vain, if we have made it understood that this co-ordination, so often mentioned, is not a simple theory, but, on the contrary, is an objective, visible, and tangible fact ; that, as Espinas maintains, psychic individuality and physiological individuality are parallel, and that consciousness is unified or dispersed along with the organism. Still, the term consciousness or physical individuality is full of pitfalls that I shall not attempt to disguise. If psychic individuality is, as we maintain, only the subjective expression of the organism, in proportion as we deviate from the human type the greater is the obscurity that surrounds us. Consciousness is a function which can be compared to that of generation, because they both express the whole individual. Let us grant to even the most elementary organisms a consciousness—diffuse as all their vital properties, particularly generation. We see the latter, in proportion as we ascend, become localized, monopolize a part of the organism, which, through countless modifications and improvements, becomes as regards that function and it alone the representative of the whole organism. The psychic function

* Perrier, *Ibid.*, p. 448, 491, 501.

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follows an analogous process. In its highest degree it is distinctly localized; and has monopolized a part of the organism, which as to this function and this function alone becomes a representative of the whole organism. By a long series of successive functional delegations, the brain of higher animals has succeeded in concentrating within itself the greater part of the psychic activity of the colony; by degrees it has received a more and more extended mandate, before obtaining the complete abdication of its associates.*

But, in taking a species of animals at hazard, how shall we know correctly the degree which the psychic activity has attained? Physiologists have made many experiments upon the spinal cord in frogs; is its relative psychic value the same with man? It is very doubtful.

II.

Let us revert to man, and let us first study his purely physical personality. For the present we shall eliminate all states of consciousness,—without forgetting to restore them later,—in order to consider only the material bases of human personality.

We need scarcely remind the reader that all the organs belonging to what is called vegetative life—the heart, the vessels, the lungs, the intestinal canal, the liver, kidneys, etc.—although they may appear independent of each other, and each seem entirely absorbed in its particular function, are yet closely and solidly-bound together. The centripetal and centrifugal nerves of the great sympathetic nerve and of the cerebro-spinal system (the difference between which tends more and more to become effaced) are with their

* Espinas. *Les Sociétés Animales*, p. 520.

ganglia the innumerable agents of this co-ordination. Now is their activity confined to the simple molecular disturbance which constitutes the nervous influx, or has it also a psychic, conscious effect? There can be no doubt as regards morbid cases that the activity in question is felt. In the normal case it only produces that vague consciousness of life which we have so frequently mentioned. But whether vague or not it matters but little. We maintain even that the nervous actions which represent the totality of organic life are really the fundamental facts of personality, and that their value as such, thus to speak, is in inverse ratio to their psychological intensity. They do vastly more than merely call forth a few unstable and superficial states of consciousness; they fashion the nervous centres, impart to them a proper tone and habit. Let us imagine for a moment the prodigious power of such actions (however weak we may suppose them to be) incessantly transmitted, without rest or respite, ever repeating the same theme with only a few variations. Why should they not produce as a result the constitution of organic states, that is, states defined as stable, which are the anatomical and physiological representatives of the internal life? Evidently all is not dependent upon the viscera alone, because the nervous centres also have their own innate or hereditary constitution by virtue of which they react; they are not only receivers, but inciters; and we must not separate them from the organs which they represent, and with which they make one: between both there is reciprocity of action.

Where do all these nervous actions finally unite that constitute the *résumé* of organic life? No one knows. Ferrier supposes that the occipital lobes are in some

special relation with the sensibility of the viscera, and constitute the anatomical substratum of the sensations. Let this be granted purely by way of hypothesis, and in order to fix ideas. The result would be that passing from stage to stage, from one delegation to another, visceral life would here find its last representation; here it is registered in a language unknown to us but which by its very inscriptions, or (to continue the metaphor) by the disposition of its words and phrases, expresses the internal individuality, and only that, to the exclusion of all other individuality. But in truth, whether this anatomical representation exists there or elsewhere, whether it be localized or disseminated, does not in the least alter our conclusion, provided it actually exists. I do not regret having dwelt upon this point, because the co-ordination of the innumerable nervous actions of the organic life is the basis of the physical and psychical personality; because all other co-ordinations rest upon and are added to it; because it is the inner man, the material form of his subjectivity, the ultimate reason of his manner of feeling and acting, the source of his instincts, his sentiments, and his passions, and, as they used to say in the middle ages, his principle of individuation.

Let us now pass from within to without. The periphery of the body forms a surface upon which the terminal laminæ of the nerves are unequally distributed. Whether few or many the nervous filaments receive and transmit impressions, that is molecular shocks, from the different points of the body, centralize themselves in the spinal cord, and ascend into the medulla and isthmus cerebri. Here there is a new importation,—that from the cranial nerves,—and now the transmission of the sensorial impressions is complete.

Let us not forget that the centrifugal nerves behave in the same way, yet in the direction of increasing decentralization. Briefly, the spinal cord, consisting of a mass of contiguous and accumulated ganglia, and particularly the medulla with its special centres (of respiration, phonation, deglutition, etc.), while they are organs of transmission, represent a reduction to unity of an infinity of nervous actions disseminated throughout the body.

At this point the question becomes exceedingly obscure. The mesencephalon seems to possess a more complicated reflex function than the medulla, and the medulla a more complex function than the spinal cord. The striated bodies would seem to be a centre in which are organized the habitual or automatic movements. The optic thalami would be the points in which the sensitive impressions gather together, in order to reflect themselves in movements.

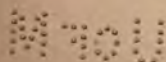
However this may be, we know that the internal capsule—a bundle of white substance forming a continuation of the cerebral peduncle—traverses the opto-striate bodies, penetrating into the channel between the optic thalami and the lenticular nucleus, and that it expands within the hemisphere, forming the corona radiata of Reil. This is the gateway through which pass all the sensory and motor fibres that come from or move toward the opposite part of the body. The anterior part contains only motor fibres. The posterior part contains all the sensory fibres, a certain number of motor fibres, and all the fibres coming from the organs of sense. The sensory bundle of fibres being completed is again divided: one part ascends towards the fronto-parietal convolution; the others bend backward towards the occipital lobe; the bundle of motor

fibres is distributed in the gray cortex of the motor zones.

All these details, however wearisome they may seem to the reader notwithstanding their brevity, prove the intimate correlation established between all the parts of the body and the cerebral hemispheres. Here the study of the localization of the functions, although imperfect, admits of some precision : for instance, it is established that there is a motor zone (formed by the ascending frontal and parietal convolutions, paracentric lobe, and base of the frontal convolutions) in which appear represented the movements of the different parts of the body ; there is also a sensory zone, which is less defined [the occipital lobes (?) and the temporo-parietal region]. The function of the frontal lobes is not exactly known. We may however incidentally notice the recent hypothesis of Dr. Hughlings Jackson, who regards them as more complex combinations and co-ordinations of the other centres—being as it were a representation of representations.*

We must leave aside all past and present discussions upon the physiological and psychological rôle of these centres ; which would fill a large volume. Taking the question in its entirety, we may say that the cortical substance represents all the forms of the nervous activity : visceral, muscular, tactile, visual, auditory, olfactory, gustatory, motor, significatory. This representation is not direct ; an impression does not go from the periphery to the brain like a telegraphic dispatch from one office to another. In a certain case in which the spinal cord was reduced to the size of a quill, and the gray substance infinitely small, the subject still had feeling (Charcot). But, whether indirect or even

* *Lectures on Evolution and Dissolution of Nervous System*, 1884.



doubly indirect, this representation is or can be a total representation. Between the *equivalents* of these nervous actions disseminated in the body there exist innumerable connections (commissures between the two hemispheres, and between the different centres of each hemisphere); some innate, others established by experience,* having all possible degrees from the most stable to the most ephemeral. Physical personality, accordingly, or more exactly its last representation, appears to us, not like a central point from whence everything radiates and on which everything abuts (e. g. the pineal gland of Descartes), but like some prodigiously tangled and inextricable maze in which histology, anatomy, and physiology are bewildered at every turn.

Even from this exceedingly imperfect sketch we are able to perceive that the term consensus of coördination is not a simple *flatus vocis*, an abstraction, but the expression of the nature of things.

II.

Reinstating, now, the psychic element which up to this point had been eliminated, let us see what will follow. We must bear in mind that to us consciousness is not an entity, but a sum of states of which each is a phenomenon of a particular kind, bound up with certain conditions of the activity of the brain, which exists when they exist, is lacking when they are absent, disappears when they disappear. Hence it follows that the sum of the states of consciousness in man

*It is clear, for example, that with a man who does not know how to write, certain associations of very delicate movements are not established, and consequently are neither represented in the encephalon, nor associated with the nervous dispositions which represent the same words in a vocal form. This applies to many other cases.

is very inferior to the sum of the nervous actions (reflexes of every order from the most simple to the most compound). To be more precise: during the lapse of say five minutes there is produced in us a successive series of sensations, feelings, images, ideas, acts. It is possible to count them, and to determine their number with tolerable certainty. During the same lapse of time, in the same man, there will be produced a much greater number of nervous actions. *Conscious personality*, accordingly, cannot be a representation of *all* that takes place in the nervous centres; it is but an extract, a synopsis of it. Such is the inevitable consequence of our mental nature: our states of consciousness are arranged in time, not in space, according to one dimension, not according to several. By fusion and integration of the simple states among themselves, very complex states are formed which enter into the series as if they were simple; to a certain extent they may even coexist for a time; but ultimately we have to admit that the sphere of consciousness, the "Umfang des Bewusstseins," above all of clear consciousness, remains always very limited. It is, accordingly, impossible to regard conscious personality in reference to objective, cerebral personality, as an impression that corresponds exactly to the design from which it is made: it resembles rather a topographical plan with respect to the country which it represents.

Why do certain nervous actions become conscious, and which are they? To answer this question would be to solve the problem of the conditions of consciousness. But as we have already said, these are in a great measure unknown. There also has been much discussion concerning the part played in the genesis of consciousness by the five layers of the cortical cells;

but by the admissions of the authors themselves all this is pure hypothesis. Let us pass beyond, therefore; psychology derives no profit from leaning upon a physiology without foundation. We can prove that the ever unstable states of consciousness evoke and supplant each other. It is the effect of a transmission of force and of a conflict of forces which, in our view, takes place, not between the states of consciousness, as is generally supposed, but between the nervous elements that support and engender them. These associations and antagonisms, so well studied in our own time, do not pertain to the present subject. We must advance still further, and go down to the conditions of their organic unity. The states of consciousness, in fact, are not like will-o'-the-wisps, by turns kindled and extinguished: there is something that unites them, and which is the subjective expression of their objective co-ordination. Here we may discern the ultimate ground of their continuity. Although we have already studied this point, still, in view of its paramount importance, I do not hesitate to revert to it under a different form.

We observe that for the present it is not a question of reflective personality, but of that spontaneous, natural feeling of ourselves, which exists in every healthy individual. Each of my states of consciousness enjoys the double character of being such or such a one, and moreover of being *mine*: a pain is not merely a pain, but is also *my* pain; the vision of a tree, not only the vision of a tree, but *my* vision of a tree. Each state bears a mark through which it appears to me as belonging to myself; without which it appears as something foreign to me; as happens, we have already seen, in several morbid cases. This common mark is the

sign of their common origin, and whence could it spring except from the organism? Let us imagine that we were able to suppress in a fellow man the five special senses and along with them their entire psychological products (perceptions, images, ideas, associations of ideas among themselves and of emotions along with the ideas). A suppression of this kind having been made, there still remains the internal, organic life, with its own, peculiar sensibility—the expression of the state of the function of each organ, of their general or local variations, of the rise or the fall of the vital tone. The state of a man immersed in profound slumber sensibly approaches to our hypothesis. If, now, we essay the contrary hypothesis, we find it absurd and contradictory. We cannot conceive to ourselves the special senses, with the psychic life which they support, as having no real form, as being isolated from general sensibility and suspended in *vacuo*. Each sensorial apparatus is not as a matter of fact an abstraction: there does not exist a visual or auditory apparatus in general, such as is described in treatises on physiology, but a concrete, individual apparatus, of which there are never produced two perfectly identical specimens in individuals of the same species, except, perhaps, occasionally in twins. Yet this is not all. Besides having its peculiar constitution in each individual—the stamp which it directly and necessarily impresses upon all its products—each sensorial apparatus, at every instant and under all forms, depends on the organic life, on circulation, digestion, respiration, secretion, and the rest. These different expressions of individuality are added to every perception, emotion, and idea; they are one with these, as harmonics are with a fundamental tone. This personal, possessive char-

acter of our states of consciousness is not, accordingly, as some authors have maintained, the result of a more or less explicit judgment which affirms them as mine, at the instant they are produced. *The personal mark is not superadded, but is included*; it forms an integral part of the event, and results from its physiological conditions. By studying the state of consciousness alone we shall not be able to discover its origin; for it cannot be at the same time effect and cause, subjective state and nervous action.

And pathological facts confirm this conclusion. We have seen the feeling of the ego rise or fall according to the state of the organism and certain patients maintain that their "sensations have changed," which means that the fundamental tone has no longer the same harmonics. Finally, we have seen states of consciousness by slow degrees lose their personal character, become objective and foreign to the individual. Now can these facts be explained on any other theory?

Stuart Mill, in a passage often quoted,* asks where is the bond, the inexplicable law, "the organic union," which connects one state of consciousness with another, the common and permanent element; and he finds that we know nothing definite about the mind, except its states of consciousness. Doubtless so, if we limit ourselves to pure ideology. But a group of effects is not a cause, and however minutely we may

* In his *Examination of Sir William Hamilton's Philosophy*. It would only be fair to observe that in the form in which Mill puts the question—the reduction of the ego to organism would not aid him much, for in this passage he considers the body not as a physiologist, but as a metaphysician. We note incidentally that the theory maintained here, although materialistic in form can adopt itself to any metaphysics. We essay to reduce conscious personality to its immediate conditions—the organism. As regards the final conditions of these conditions, we have nothing to say, and everybody is free to conceive them according to his own fancy. Regarding this point see the very pertinent remarks of M. Fouillée in his *La science sociale contemporaine*, pp. 224-225.

study them, our work will be incomplete if we do not descend lower—into that dark region where, as Taine says, “innumerable currents incessantly meander without our being conscious thereof.” The organic bond demanded by Stuart Mill exists, by definition so to speak, in the organism.

Thus the organism and the brain, as its highest representation, constitute the real personality, containing in itself all that we have been, and the possibilities of all that we shall be. The complete individual character is inscribed there with all its active and passive aptitudes, sympathies, and antipathies; its genius, talents, or stupidity; its virtues, vices, torpor, or activity. Of all these, what emerges and actually reaches consciousness is only a small item compared with what remains buried below, albeit still active. Conscious personality is always but a feeble portion of physical personality.

The unity of the ego, consequently, is not that of the one-entity of spiritualists which is dispersed into multiple phenomena, but the co-ordination of a certain number of incessantly renascent states, having for their support the vague sense of our bodies. This unity does not pass from above to below, but from below to above; the unity of the ego is not an initial, but a terminal point.

Does there really exist a perfect unity? Evidently not in the strict, mathematical sense. In a relative sense it is met with, rarely and incidentally. In a clever marksman in the act of taking aim, or in a skilled surgeon performing a difficult operation all is found to converge, both physically and mentally. Still, let us take note of the result: in these conditions the awareness of real personality disappears; the conscious

individual is reduced to an idea; whence it would follow that perfect unity of consciousness and the awareness of personality exclude each other. By a different course we again reach the same conclusion; the ego is a co-ordination. It oscillates between two extreme points at which it ceases to exist: viz. perfect unity and absolute incoördination. All the intermediate degrees are met with in fact, and without any line of demarcation between the healthy and the morbid; the one encroaches upon the other.*

The unity of the ego, in a psychological sense, is, therefore, the cohesion, during a given time, of a certain number of clear states of consciousness, accompanied by others less clear, and by a multitude of physiological states which without being accompanied by consciousness like the others, yet operate as much and even more than the former. Unity, in fact, means co-ordination. The conclusion to be drawn from the above remarks is namely this, that the consensus of consciousness being subordinate to the consensus of the organism, the problem of the unity of the ego is, in its ultimate form, a biological problem. To biology pertains the task of explaining, if it can, the genesis of organisms and the solidarity of their component parts. Psychological interpretation can only follow in its wake. This we have attempted to demonstrate in detail by the exposition and discussion of morbid cases. At this point, then, our present task ends.

* Even in the normal state the co-ordination is often sufficiently loose to allow several series to co-exist separately. We can walk or perform manual work with a vague and intermittent consciousness of the movements, at the same time singing, musing: but if the activity of thought increases, the singing will cease. With many people it is a kind of substitute for intellectual activity, an intermediate state between thinking and not-thinking.

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